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STAFF REPORT AND RECOMMENDATION ON CONSISTENCY DETERMINATIONS

Consistency Determination Nos.:	**CD-047-05** **CD-048-05** **CD-049-05**
Federal Agency:	**US Department of the Interior, Minerals Management Service**
Project Location:	Pacific Outer Continental Shelf ("OCS") leases in the **Bonito, Rocky Point and Sword Units**, in the southern Santa Maria Basin, adjacent to the Point Arguello Unit between Point Arguello and Point Conception, offshore Santa Barbara County.
Project Description:	Suspend (i.e., extend the lease term) by 18 months seven OCS oil and gas leases in the Bonito Unit; suspend by 37 months two OCS oil and gas leases in the Rocky Point Unit; and suspend by 25 months four OCS oil and gas leases in the Sword Unit.
Substantive File Documents:	See Exhibit 1

SUMMARY

The U.S. Department of the Interior, Minerals Management Service ("MMS") has submitted a consistency determination for the Bonito, Rocky Point and Sword Units, as described below:

Consistency Determination Number	Unit	Operator	Lease Numbers[1]	Suspension Term
CD-047-05	Bonito	PXP	443, 445, 446, 449, 450[2], 499, 500	18 months
CD-048-05	Rocky Point	Arguello	452, 453	37 months
CD-049-05	Sword	Samedan	319, 320, 322, 323A	25 months

No in-water activities are proposed during the suspension period for these units, and MMS maintains that any subsequent oil and gas drilling and transportation will occur using only existing Point Arguello Unit infrastructure; specifically, Platforms Hermosa, Hidalgo and Harvest, and associated pipelines and facilities. No new platforms or other new infrastructure will be required for development of these units.

The Bonito, Rocky Point and Sword Units are located offshore Santa Barbara County, in the southern portion of the Santa Maria Basin, adjacent to the Point Arguello Unit and existing platforms Hermosa, Hidalgo, and Harvest. These platforms and associated infrastructure were reviewed by the Commission in 1983-1984 under consistency certifications CC-CC-12-83, CC-24-84, and CC-27-83, respectively, and were installed in 1985-1986.

Based on the decision of the US District Court in the case of *State of California v. Norton* (affirmed by the US Court of Appeal, Ninth Circuit), the lease suspensions are subject to the consistency review requirements of Section 307(c) of the Coastal Zone Management Act ("CZMA"). The consistency determinations for the Bonito, Rocky Point and Sword Unit lease suspensions are three of ten MMS has submitted to the Commission.

The court decision clarified that the Commission's review of a lease suspension is similar to its review of a lease sale in the sense that the Commission is to analyze the broad and long-term coastal effects (i.e., post-suspension exploration, development and production activities) that are reasonably foreseeable if a lease suspension is granted. The court nevertheless acknowledged, and the Commission agrees, that a lease suspension is not identical to a lease sale. The subject lease suspensions have been requested decades after the initial lease sale, after most of these leases have been explored and after detailed environmental and technical evaluations have been

[1] The full identification for Lease 443 is: Lease OCS-P 0443. Other leases are identified similarly. For the remainder of this report, lease references will use the shortened name.

[2] Most of Lease 450 is located in the Point Arguello Unit; the entire lease is therefore held by production and is not being considered for suspension. The northwestern portion of Lease 450 is located in the Bonito Unit, however; therefore the lease is included in this report.

performed. Substantially more information on these leases is available now than was available at the original lease sale stage.

In an April 22, 2005, letter to MMS, Commission staff requested additional information regarding the "reasonably foreseeable direct and indirect effects" of the requested suspensions, namely, the likely post-suspension exploration, development, and production activities. Commission staff informed MMS that additional information is needed in order for the Commission to determine whether granting the lease suspensions is consistent with the enforceable policies of the California Coastal Management Program ("CCMP"). Commission staff requested, for example, that MMS estimate how the future development of the Bonito, Rocky Point and Sword Units might extend the life of existing Point Arguello Unit infrastructure. MMS replied that most of the information the Commission staff requested was more appropriate for exploration and production review stages, rather than for a review of the lease suspensions themselves. The Commission disagrees with this position.

Primary concerns raised by the proposed suspensions, and reasonably foreseeable future development using the Point Arguello Unit platforms, pipelines, and onshore facilities, are: 1) whether the reasonably foreseeable additional development will extend the life of the existing infrastructure, and if so, whether any such extension of life of the facilities will be consistent with the applicable policies of the CCMP, and 2) whether new circumstances have arisen (such as increased oil spill risk from aging facilities, and/or new or changed circumstances in the commercial fishing industry) that need to be addressed during the review of the suspensions for consistency with the CCMP. In order to determine whether suspending the leases is consistent with the CCMP, the Commission has requested that MMS provide the following information:

1. **Extension of Platform and Facility Life.** To evaluate potential impacts to commercial fishing and visual resources, and to evaluate safety issues related to the structural soundness of existing infrastructure, the Commission has requested information from MMS regarding the potential for the proposed lease suspensions to extend the lifespan of Platforms Hidalgo, Hermosa and Harvest.
2. **Structural Integrity Analysis.** To evaluate safety issues related to the structural soundness of Platforms Hidalgo, Hermosa, and Harvest, and associated pipelines and facilities, the Commission has requested an analysis of the structural integrity of these platforms and associated infrastructure.
3. **Oil Spill Risk Analysis.** To evaluate potential impacts from an oil spill to marine and shoreline resources, the Commission has requested detailed information on: 1) worst case oil discharge volumes; 2) oil spill probabilities, and 3) oil spill trajectories.

The Commission is unable to determine whether or not suspending the leases is consistent with the policies of the Coastal Act/CCMP related to access and recreation (Sections 30210, 30211, 30212, and 30220), marine resources and water quality (Sections 30230 and 30231), commercial fishing (Sections 30230 and 30234.5), environmentally sensitive habitat areas (Section 30240), cultural resources (Section 30244), visual resources (Section 30251), and hazards (Sections 30253(2) and 30262(a)), because it lacks the information necessary to make these determinations. In addition, while development at these units would be subject to the provisions of the coastal-dependent

industrial "override" policy (Section 30260) of the Coastal Act, the lack of the above-identified information also makes it impossible for the Commission to make the necessary findings under that policy. The Commission therefore objects to MMS's consistency determination, based on lack of adequate information to determine the lease suspensions' consistency with the enforceable policies of the CCMP/Coastal Act.

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EXHIBITS (Attached to this report)

APPENDICES (In separate packet)

1 STAFF RECOMMENDATION

1.1 Motions and Resolutions

1.1.1 CD-047-05: Bonito Unit

Motion**:**

> *I move that the Commission **concur** with consistency determination CD-047-05, that the project described therein is consistent to the maximum extent practicable with the enforceable policies of the California Coastal Management Program.*

Staff Recommendation:
Staff recommends a **NO** vote on the motion. Failure of this motion will result in an objection to the determination and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

Resolution to Object to Consistency Determination:

> *The Commission hereby **objects** to the consistency determination by the Minerals Management Service for the proposed project, finding that the consistency determination lacks information necessary to evaluate the project's consistency with the California Coastal Management Program.*

1.1.2 CD-048-05: Rocky Point Unit

Motion:

> *I move that the Commission **concur** with consistency determination CD-048-05, that the project described therein is consistent to the maximum extent practicable with the enforceable policies of the California Coastal Management Program.*

Staff Recommendation:
Staff recommends a **NO** vote on the motion. Failure of this motion will result in an objection to the determination and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

Resolution to Object to Consistency Determination:

> *The Commission hereby **objects** to the consistency determination by the Minerals Management Service for the proposed project, finding that the consistency determination lacks information necessary to evaluate the project's consistency with the California Coastal Management Program.*

1.1.3 CD-049-05: Sword Unit

Motion:

*I move that the Commission **concur** with consistency determination CD-049-05, that the project described therein is consistent to the maximum extent practicable with the enforceable policies of the California Coastal Management Program.*

Staff Recommendation:
Staff recommends a **NO** vote on the motion. Failure of this motion will result in an objection to the determination and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

Resolution to Object to Consistency Determination:

*The Commission hereby **objects** to the consistency determination by the Minerals Management Service for the proposed project, finding that the consistency determination lacks information necessary to evaluate the project's consistency with the California Coastal Management Program.*

1.2 Applicable Legal Authorities

Section 307 of the Coastal Zone Management Act ("CZMA") (16 USC §1456) provides in part:

(c)(1)(A) Each Federal agency activity within or outside the coastal zone that affects any land or water use or natural resource of the coastal zone shall be carried out in a manner which is consistent to the maximum extent practicable with the enforceable policies of the approved State management programs.

1.2.1 Necessary Information

Section 930.43(b) of the federal consistency regulations (15 CFR §930.43(b)) requires that, if the Commission bases its objection on a lack of information, the Commission must identify the information necessary for it to assess the project's consistency with the California Coastal Management Program ("CCMP"). That section states:

If the State agency's objection is based upon a finding that the Federal agency has failed to supply sufficient information, the State agency's response must describe the nature of the information requested and the necessity of having such information to determine the consistency of the Federal agency activity with the enforceable policies of the management program.

Nature of Information Requested

As described in Section 3: Coastal Act Issues of this report below, the Commission finds these consistency determinations lack the information that the Commission has requested from the Minerals Management Service ("MMS") to enable the Commission to determine whether suspending the leases is consistent to the maximum extent practicable with the policies of the

Coastal Act/CCMP related to: access and recreation (Sections 30210, 30211, 30212, and 30220), marine resources and water quality (Sections 30230 and 30231), commercial fishing (Sections 30230 and 30234.5), environmentally sensitive habitat areas (Section 30240), cultural resources (Section 30244), visual resources (Section 30251), and hazards (Sections 30253(2) and 30262(a)). In order to determine if the lease suspensions are consistent with the CCMP, the Commission has requested that MMS provide it with the following necessary information:

1. **Extension of Platform and Facility Life.** To evaluate potential impacts to commercial fishing and visual resources, and to evaluate safety issues related to the structural soundness of existing infrastructure, the Commission has requested information from MMS regarding the potential for the proposed lease suspensions to extend the lifespan of Platforms Hidalgo, Hermosa and Harvest, and associated facilities. See below Section 2.3.4: Information Lacking from the Project Description
2. **Structural Integrity Analysis.** To evaluate safety issues related to the structural soundness of Platforms Hidalgo, Hermosa, and Harvest, and associated facilities, the Commission has requested an analysis of the structural integrity of this infrastructure. See below Section 3.5: Hazards.
3. **Oil Spill Risk Analysis.** To evaluate potential impacts from an oil spill to coastal resources, the Commission has requested detailed information on: 1) worst case discharge volumes; 2) oil spill probabilities, and 3) oil spill trajectories. See below Section 3.1.4: Oils Spill Risk Analysis.

Necessity for Information Requested

The need for this information is discussed in the findings below, as follows:

1. **Extension of Platform and Facility Life.** See below Section 3.3: Commercial Fishing, Section 3.4: Visual Resources, and Section 3.5: Hazards.
2. **Structural Integrity Analysis.** See below Section 3.5: Hazards.
3. **Oil Spill Risk Analysis.** See below Section 3.1: Oil Spills.

In addition, as discussed in Section 3.8: Coastal Dependent Industrial Facility "Override" Provision, this information is also necessary for the Commission's analysis under Section 30260 of the Coastal Act/CCMP.

1.2.2 Practicability

The federal consistency regulations implementing the CZMA include the following provision:

> *Section 930.32 Consistent to the maximum extent practicable.*
>
> *(a)(1) The term ''consistent to the maximum extent practicable'' means fully consistent with the enforceable policies of management programs unless full consistency is prohibited by existing law applicable to the Federal agency.*

Since MMS has raised no issue of practicability, as so defined, the standard before the Commission is full consistency with the policies of the CCMP.

1.2.3 Federal Agency Response to a Commission Objection

Section C(a)(i) of Chapter 11 of the CCMP requires federal agencies to inform the Commission of their response to a Commission objection. This section provides:

> *If the Coastal Commission finds that the Federal activity or development project… is not consistent with the management program, and the federal agency disagrees and decides to go forward with the action, it will be expected to (a) advise the Coastal Commission in writing that the action is consistent, to the maximum extent practicable, with the coastal management program, and (b) set forth in detail the reasons for its decision. In the event the Coastal Commission seriously disagrees with the Federal agency's consistency determination, it may request that the Secretary of Commerce seek to mediate the serious disagreement as provided by Section 307(h) of the CZMA, or it may seek judicial review of the dispute.*

The federal consistency regulations reflect a similar obligation; 15 CFR §930.43 provides:

> *State agency objection…*
>
> *(d) In the event of an objection, Federal and State agencies should use the remaining portion of the 90-day notice period (see §930.36(b)) to attempt to resolve their differences. If resolution has not been reached at the end of the 90-day period, Federal agencies should consider using the dispute resolution mechanisms of this part and postponing final federal action until the problems have been resolved. At the end of the 90-day period the Federal agency shall not proceed with the activity over a State agency's objection unless: (1) the Federal agency has concluded that under the ''consistent to the maximum extent practicable'' standard described in section 930.32 consistency with the enforceable policies of the management program is prohibited by existing law applicable to the Federal agency and the Federal agency has clearly described, in writing, to the State agency the legal impediments to full consistency (See §§930.32(a) and 930.39(a)), or (2) the Federal agency has concluded that its proposed action is fully consistent with the enforceable policies of the management program, though the State agency objects.*
>
> *(e) If a Federal agency decides to proceed with a Federal agency activity that is objected to by a State agency, or to follow an alternative suggested by the State agency, the Federal agency shall notify the State agency of its decision to proceed before the project commences.*

1.3 Standard of Review

The standard of review for federal consistency determinations is the enforceable policies of the CCMP, of which the substantive policy component is the Chapter 3 policies of the Coastal Act (California PRC §§30200-30265.5).

2 FINDINGS AND DECLARATIONS

The Commission finds and declares as follows:

2.1 Introduction

Samedan Oil Corporation ("Samedan"), Arguello, Inc. ("Arguello"), and Plains Exploration and Production Company ("PXP") have submitted requests to the MMS for a suspension[3] of its undeveloped OCS oil and gas leases. The units are located offshore Santa Barbara County, in the southern portion of the Santa Maria Basin, adjacent to the Point Arguello Unit and existing platforms Hermosa, Hidalgo, and Harvest. (See Exhibits 2 and 3.) The lease suspensions addressed in this report are listed in Table 1, below.

Table 1: Lease Suspensions Addressed in this Report

Unit	Operator	Lease Numbers[4]	Consistency Determination Number	Suspension Term
Bonito	PXP	443, 445, 446, 449, 450[5], 499, 500	CD-047-05	18 months
Rocky Point	Arguello	452, 453	CD-048-05	37 months
Sword	Samedan	319, 320, 322, 323A	CD-049-05	25 months

Pursuant to Section 307(c) of the CZMA (16 USC §1456(c)(1)), the MMS review and approval of the operators' requested lease suspensions is a federal activity subject to consistency review by the Commission. Accordingly, on April 7, 2005, MMS provided the Commission with consistency determinations for the operators' requests for lease suspensions.

This report is one of four Commission reports prepared to review the consistency determinations submitted by MMS for all 36 OCS lease suspensions. Other Commission reports address lease suspensions in the Cavern Point Unit, the Gato Canyon Unit, and the Northern Santa Maria Basin Units, discussed in more detail in Section 2.2.3: Current OCS Operations in California below.

[3] A suspension is defined in 30 CFR § 250.105 as: "a granted or directed deferral of the requirement to produce (Suspension of Production) or to conduct leaseholding operations (Suspension of Operations)." A lease suspension is effectively an extension of the life of the lease. (30 CFR §250.169(a)) See Section 2.2.3: Current OCS Operations in California of this report, below.

[4] The full identification for Lease 443 is: Lease OCS-P 0443. Other leases are identified similarly. For the remainder of this report, lease references will use the shortened name.

[5] Most of Lease 450 is located in the Point Arguello Unit; the entire lease is therefore held by production and is not being considered for suspension. The northwestern portion of Lease 450 is located in the Bonito Unit, however; therefore the lease is included in this report.

In consistency determinations CD-047-05, CD-048-05 and CD-049-05, the operators are requesting the lease suspensions to allow time to prepare revisions to the Exploration Plan (for exploration of the Sword Unit) and to the Development and Production Plans for Platforms Hidalgo and Hermosa (for development of the Bonito and Rocky Point Units.) During the lease suspension term, the operators will conduct in-office activities to revise the existing Exploration Plan and Development and Production Plans. No "on the water" activities are proposed to take place during the suspension.

Before any drilling or development activity can actually occur in the subject units, the revised Exploration Plan and Development and Production Plans must also be separately approved by MMS (pursuant to 30 CFR §250.203, 250.204). MMS can not approve any such further activity unless the Commission concurs with a consistency certification from the operator, or the Secretary of Commerce determines on appeal of a Commission objection that the activity is consistent with the objectives or purposes of the CZMA, or is necessary in the interest of national security (15 CFR §930.120).

The goal of the oil and gas operators, beyond the requested suspension period, is to explore, develop and produce marketable quantities of oil and gas from reservoirs underlying the Bonito, Rocky Point, and Sword Units, using extended-reach directional drilling from existing Platforms Hermosa and Hidalgo, located in the adjacent Point Arguello Unit.

2.2 Background of Federal OCS Leases

2.2.1 Coastal Commission Review of Lease Suspensions

MMS has submitted consistency determinations for a total of 36 lease suspensions off the coast of San Luis Obispo, Santa Barbara and Ventura Counties. The leases are organized into nine separate "units," and one lease not within a unit (Lease 409).[6] (See Section 2.2.3: Current OCS Operations in California below.)

Each lease was issued by the US Department of the Interior before 1984, and had a primary term of five years.[7] After the initial term of a lease lapses, the lease continues in effect so long as oil and gas are produced in paying quantities or drilling operations are underway. If production or approved drilling is not underway at the end of the lease term, the lease expires and the lessee loses the right to exploit the oil and gas resources in the lease area (30 CFR § 250.180).

Alternatively, a lease may be "suspended." A suspension allows a lessee to suspend exploration, development, and/or production activities for a period of time without having the lease expire,

[6] Consistent with the Outer Continental Shelf Lands Act ("OCSLA") (as amended), MMS's regulations define the purpose of unitization to include 1) conserving natural resources; 2) preventing waste; and/or 3) protecting correlative rights (30 CFR § 250.1300).

[7] MMS has not conducted a lease sale off the coast of California since 1984. See Appendix A for details on the lease sales conducted since 1963, including those sales relevant to the 36 subject leases. In 1990, former President George H. W. Bush, imposed a leasing moratorium offshore California, among other areas. President Bush imposed the moratorium in response to findings by the National Research Council that environmental information was inadequate to properly inform leasing offshore Florida and California.

thereby extending the life of the lease (OCSLA § 5(a)(1); 43 USC §1334(a)(1)). Suspensions can occur in two ways: first, the federal government can direct suspensions; for example, in order to comply with federal law or with court orders. Second, a lessee can request a suspension in order to keep the lease in effect under certain conditions specified in regulation without the lessee having to engage in exploration, development or production activities (30 CFR §§ 250.168-177). During a directed suspension, no activities can occur. During a granted suspension, MMS can require that certain specified activities and milestones be met in order to demonstrate that the lessee intends to keep the lease from expiring.

Of the leases issued before 1984, 40 have not begun producing paying quantities of oil or gas. Additionally, a portion of Lease 450 that is assigned to the undeveloped Bonito Unit has not begun producing quantities of oil and gas. These leases would have expired if MMS had not repeatedly extended the terms of the leases, through both directed and requested suspensions.

Until October 1992, MMS, at the request of the lessees, had granted suspension of the 40 leases. On October 15, 1992, MMS directed suspensions of the leases in order to conduct the *California Offshore Oil and Gas Energy Resources Study: Development Scenarios and Onshore Physical Infrastructure in the Tri-County Area of San Luis Obispo, Santa Barbara and Ventura* (known as the "COOGER Study"). In 1999, when the directed suspensions were about to end, MMS advised the lessees that they would need to request suspensions in order to keep the leases from expiring. In May 1999, the lessees submitted requests for suspensions. MMS declined to extend the lease terms of four of the leases,[8] but approved the requested suspensions for the remaining 36 leases.

By letter dated July 27, 1999, the Coastal Commission informed the Department of Interior and MMS that, pursuant to the CZMA (16 USC §1456(c)(3)), the Commission was asserting its authority to review the lease suspensions for consistency with the CCMP. In an August 5, 1999, follow-up letter to MMS, the Commission's Executive Director identified a number of concerns related to changed circumstances and new information that needed to be addressed in the MMS review, including the age of the leases, the poor quality of the oil, the proximity of the leases to marine sanctuaries, and potentially changed environmental circumstances. The Coastal Commission also advised MMS that pursuant to the CZMA the lessees were required to provide the Coastal Commission with a certification of consistency with the CCMP.

MMS disagreed with the Coastal Commission's position that the lease suspensions were subject to the consistency review requirements of the CZMA, and refused to submit consistency certifications to the Commission. In November 1999, MMS notified the lessees that it had approved their requests for suspensions. The State of California challenged MMS's failure to comply with the requirements of the CZMA with respect to the lease suspensions in US District Court, in the case of *State of California v. Norton*. On June 15, 2001, the district court held that the approval of the lease suspensions by MMS is a federal agency activity subject to consistency

[8] By decision dated August 16, 1999, MMS removed three leases in the Santa Maria Unit (Leases 420, 424, and 429) and one in the Gato Canyon Unit (Lease 462) and they expired. The lessees appealed the decision to the Interior Board of Land Appeals, and the appeals are currently under review.

review by California under the CZMA. The federal defendants appealed. On December 2, 2002, the US Court of Appeals for the Ninth Circuit affirmed the district court judgment (311 F.3d 1162 (9th Cir. 2002)).

On April 7, 2005, pursuant to the court's order, MMS submitted to the Commission 10 consistency determinations — one consistency determination for each of the nine units, plus one for Lease 409. This report reviews the suspensions of leases in the Bonito, Rocky Point and Sword Units. The lease suspensions for other units are analyzed in separate Commission reports.

2.2.2 Scope of Coastal Commission Review

At the time of issuance of the 36 subject leases, a lease sale was not a federal agency activity that required federal consistency review by the Commission. (See *Secretary of the Interior v. California* (1984) 464 U.S. 312.) In 1990, in the Coastal Zone Act Reauthorization Amendments of 1990 ("CZARA"), Congress amended the CZMA specifically to extend the consistency requirements of that statute to the sale of leases on the OCS as a federal agency activity. Congress clarified its intent in enacting the CZARA amendments to the CZMA in the following manner:[9]

> *The Conferees intend the determination of whether a specific federal agency activity may affect any natural resource, land use, or water use in the coastal zone to include...cumulative and secondary effects. Therefore, the term "affecting"* [in CZMA §307(c)] *is to be construed broadly, including direct effects which are caused by the activity and occur at the same time and place, and indirect effects which may be caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.* [Emphasis added.]

Because these leases predated the 1990 amendments to the CZMA, the State of California never had the opportunity to review these leases for CZMA consistency at the lease sale stage.

In its decision in *California v. Norton,* the Appeals Court specifically rejected the argument that review of the lease suspensions would duplicate review of activities described in Exploration Plans or Development and Production Plans. The court stated:

> *In subjecting lease sales to consistency review, Congress has made it clear that the statute does not prohibit consistency review of federal agency activities that are not subsidiary to exploration and development and production plans. The exploration and development and production plan stages are* not *the only opportunities for review afforded to States under the statutory scheme…*
>
> *…These lease suspensions represent a significant decision to extend the life of oil exploration and production off California's coast, with all of the far reaching effects and perils that go along with offshore oil production.* (State of California v. Norton 311 F.3d 1162, 1173 (9th Cir. 2002))

[9] House Conference Report No. 101-964; 1990 *U.S. Code Cong. & Adm. News*, p. 2017.

Furthermore, the court stated that the review of lease suspensions is similar to the review of a lease sale, in that the effects to be analyzed are "very broad" and "long term."

> *Although a lease suspension is not identical to a lease sale, the very broad and long term effects of these suspensions more closely resembles the effects of a sale than they do the highly specific activities reviewed [in an Exploration Plan or Development and Production Plan]…[Lease suspension] review is available now for the broader effects implicated in suspending the leases. This phasing of review fits closely the expressed intent of Congress…* (*ibid.* at 1174)

The court made clear that the Commission's review of a lease suspension is similar to its review of a lease sale in the sense that the Commission is to analyze the broad and long-term coastal effects (i.e., post-suspension exploration, development and production activities) that are reasonably foreseeable if a lease suspension is granted. The court nevertheless acknowledged, and the Commission agrees, that a lease suspension is not identical to a lease sale. The subject lease suspensions have been requested decades after the initial lease sale, after most of these leases have been explored and detailed environmental and technical evaluations have already been performed. Substantially more information on these leases is available now than was available at the original lease sale stage. In fact, many of the undeveloped leases can be developed from existing platforms for which Development and Production Plans have been prepared, but would require only revision. In *Secretary of the Interior v. California,* the U.S. Supreme Court noted there are four distinct stages to developing an OCS oil lease: 1) formulation of a 5-year leasing plan by the Department of the Interior; 2) the lease sale; 3) exploration; and 4) development and production. Most of the 36 leases currently fall between stages 3) and 4).

MMS chose, however, to model its consistency determinations for the lease suspensions on recent Alaska Lease Sale 191. The Commission believes the Alaska model is not adequate for the review of the lease suspensions for several reasons:

- Lease Sale 191 comprised an area over 200 million acres in the Cook Inlet Planning Area as compared to the 184,191 acres encompassing the 36 undeveloped California leases. The difference is an order of magnitude (i.e., a factor of 10).

- Lease Sale 191 occurred in an OCS planning area (Cook Inlet) where no production and development of OCS oil and gas has ever been proposed, examined in detailed in environmental impact statements, or permitted, because no economically recoverable reserves have been discovered. Little environmental information is available. Thus, the available information is very general in scope.

- By contrast, the Commission's consideration of the lease suspensions takes place 2-4 decades following the 10 lease sales the federal government conducted offshore California. Forty-two of the remaining 79 OCS leases offshore California are producing oil and gas or are situated on producing units, and their development was preceded by detailed environmental review. All but one of the 36 leases have been consolidated into 9 units that have identifiable and named oil and gas fields. All but one unit have been

> granted Exploration Plans and, decades ago, lessees drilled exploratory wells discovering paying quantities of oil and gas. In the early 1990s, the lessees developed hypothetical, but likely, development scenarios for each of the leases so that MMS could prepare the COOGER Study, a 1999 study that evaluated the potential onshore constraints of developing the then-40 undeveloped leases.

Therefore, answers to the questions "if, when, and how exploration, development and production would actually occur" are far better understood for these leases as compared to a lease sale such as Alaska Lease Sale 191. Notwithstanding the level of information available about the potential development of the 36 leases, MMS chose not to submit for the Commission's review data and environmental analysis that is either readily available or could be developed now. Instead, because MMS is treating the review of the lease suspensions strictly as a "lease sale" stage, it believes it needs to provide "general" information only, *even if specific information is available.*

In an April 22, 2005, letter to MMS (included in this report as Appendix B), Coastal Commission staff requested additional information regarding the "reasonably foreseeable direct and indirect effects" of the requested suspensions, namely, the likely post-suspension exploration, development, and production activities. Commission staff informed MMS that additional information is needed in order for the Coastal Commission to determine if the proposed lease suspensions are consistent with the enforceable policies of the CCMP. For example, Commission staff requested that MMS estimate how the future development of Bonito, Rocky Point, Sword, and Cavern Point Units might extend the life of existing Point Arguello Unit platforms and Platform Gail. In its original submittal, MMS provided no information regarding how the extension of life of existing platforms, pipelines, and other infrastructure could affect coastal resources (e.g., increase risks of an oil spill, lengthen fishery preclusion areas). In its June 23, 2005, response letter (included in this report as Appendix C), MMS refused to provide certain requested information, such as an estimate of extension of platform operations, or the results of *already completed* surveys (like onshore archeology or offshore hard bottom surveys), stating that it would not be "appropriate" for MMS to provide information during the lease suspension review stage that it believes should be provided by the lessees in the form of an Exploration Plan or a Development and Production Plan. In refusing to comply with the Commission's information request, MMS states repeatedly that the operator will provide project details and further analysis if and when operators submit new or revised Exploration Plans and/or Development and Production Plans. MMS's refusal to comply with the Commission's information requests effectively results in deferral until the exploration and development stages of the consistency review that both the District Court and the Ninth Circuit Court of Appeals has directed to occur at the lease suspension stage. There is no basis for MMS's failure to fully describe now the exploration and production scenarios that the lease suspensions will make possible, or to conduct now full environmental and consistency review.

Further, Section 930.39(a) of the federal consistency regulations states that the amount of detail in the evaluation of the enforceable policies, activity description and supporting information of a consistency determination "shall be *commensurate with the expected coastal effects of the activity."* (Emphasis added). Given the potential magnitude of coastal effects of offshore oil and gas development, Section 930.39(a) requires MMS to provide as much detailed information as is available or that can reasonably be generated at the time of the review. MMS cannot defer

examination of the reasonably foreseeable future effects of the lease suspensions to future reviews of Exploration Plans and Development and Production Plans.[10]

2.2.3 Current OCS Operations in California[11]

Exhibit 2 illustrates leases, platforms and other oil and gas-related infrastructure off the coast of southern California. A total of seventy-nine Federal OCS oil and gas leases are currently located offshore California, not including the four expired leases that are under appeal. Forty-three of these leases are developed (i.e., oil and/or gas is being produced from them). The remaining 36 undeveloped leases are the subjects of the consistency determinations currently before the Commission. These leases are located between 3 and 12 miles offshore San Luis Obispo, Santa Barbara, and Ventura Counties. Table 2 presents a summary of the undeveloped leases.

Nineteen platforms support production of the developed leases offshore Santa Barbara and Ventura Counties. No platforms are located offshore San Luis Obispo County. The 19 existing platforms are supported by pipelines, processing and separation facilities, and other associated infrastructure. Onshore facilities supporting Pacific OCS oil and gas development include:

Santa Barbara County
Carpinteria Onshore Gas Facility connected to offshore Platform Habitat
Carpinteria Oil and Gas Processing Terminal connected to offshore Platforms Gail and Grace
Las Flores Canyon Santa Ynez Unit Oil and Gas Processing Facility
Gaviota Oil Heating Facility
Gaviota Storage Terminal (soon to be decommissioned)
Lompoc Oil and Gas Processing Facility
Several pipeline systems

Ventura County
Mandalay Onshore Separation Facility
West Montalvo Operations
Rincon Oil and Gas Processing Facility
La Conchita Oil and Gas Processing Facility

[10] The Commission acknowledges that there are distinctions between the broader review conducted now for a lease suspension and the detailed review of future exploration, development and production activities. Currently, only general locations for "hypothetical" platforms and pipelines are known, which the Commission believes is appropriate for this stage of review. During review of an Exploration Plan or Development and Production Plan, once the specific locations of platform, pipelines and other infrastructure are specifically defined, the Commission would, for example, require site-specific marine and terrestrial biological, geotechnical and cultural surveys.

[11] This information is taken from the EID, Section 2.2

Table 2: Undeveloped Pacific OCS Units and Leases

Unit	Operator	Lease Number(s)	Consistency Determination Number
Lion Rock	Aera Energy LLC	396, 397, 402, 403, 408, 414	CD-042-05
Point Sal	Aera Energy LLC	415, 416, 421, 422	CD-043-05
Santa Maria	Aera Energy LLC	425, 430, 431, 433, 434	CD-044-05
Purisima Point	Aera Energy LLC	426, 427, 432, 435	CD-045-05
Lease 409	Aera Energy LLC	409	CD-046-05
Bonito	PXP	443, 445, 446, 449, 450[12], 499, 500	CD-047-05
Rocky Point	Arguello	452, 453	CD-048-05
Sword	Samedan Oil Corporation	319, 320, 322, 323A	CD-049-05
Gato Canyon	Samedan Oil Corporation	460, 464	CD-050-05
Cavern Point	Venoco, Inc.	210, 527	CD-051-05

In addition to Pacific OCS activities, the region includes oil and gas leases and production in California State waters (State tide and submerged lands). State leases fall under the management and administration of the California State Lands Commission. The State Lands Commission has issued thirty-two leases located in State waters, seventeen of which are producing, and fifteen of which are non-producing. No State platforms are located offshore San Luis Obispo County; however there are onshore support facilities located in San Luis Obispo and northern Santa Barbara County, including pipelines, oil pump stations, and a heavy, high sulfur oil upgrader refinery. Platform Holly, located offshore Goleta (Santa Barbara County), and Rincon Island, located offshore Rincon Beach (Ventura County) are the only two offshore production facilities associated with State leases that are operational in the tri-county region. Platform Holly is supported onshore by the Ellwood Processing Oil and Gas Processing Facility, and Rincon Island is supported onshore by the Rincon Island and State Lease 145/410 Oil and Gas Processing Facility (see Exhibit 2). Venoco has applied to restart production from one of its two piers that extend from shore into State waters (PRC 421).

Offshore oil and gas production rates peaked in State waters in 1969 and in federal waters in 1995-1996. Federal offshore oil and gas annual production rates for the years 1984 through 2003, for the Santa Maria Basin and Santa Barbara Channel are presented in Table 3.

[12] Most of Lease 450 is located in the Point Arguello Unit; the entire lease is therefore held by production and is not being considered for suspension. The northwestern portion of Lease 450 is located in the Bonito Unit, however; therefore the lease is included in this report.

Table 3: Federal Pacific OCS Oil and Gas Annual Production Rates for 1984 through 2003

Year	Total Oil (million bbls)	Total Gas (billion ft^3)	Year	Total Oil (million bbls)	Total Gas (billion ft^3)
1984	25.3	44.1	1994	54.8	52.7
1985	23.2	60.8	1995	69.3	61.9
1986	21.7	55.5	1996	61.1	66.1
1987	24.4	53.0	1997	51.5	76.0
1988	25.5	47.7	1998	43.5	75.7
1989	27.4	49.4	1999	37.5	79.4
1990	24.5	48.2	2000	34.8	75.4
1991	27.0	51.0	2001	32.1	70.5
1992	38.3	54.0	2002	31.0	67.3
1993	46.8	50.8	2003	28.7	58.1
Total	**728.4**	**1197.6**			

Source: MMS, Pacific OCS Region. *Annual Summary of Production for Entire Region.* December 14, 2004

Total projected reserves for the 36 undeveloped leases is listed in Table 4, below:

Table 4: Total Projected Reserves of 36 Undeveloped Leases

Location		Oil Reserves (million bbls)	Gas Reserves (billion ft^3)
Northern Santa Maria Basin	Northern Platform	115	47
	Central Platform	118	24
	Southern Platform	90	18
Bonito and Electra Fields (Bonito Unit)		22	11
Rocky Point Field (Rocky Point Unit and Lease 451)		39	11.7
Sword		29	7.3
Gato Canyon		77	46
Cavern Point		22	20
Total		**512**	**185**

Source: EID Table 5.2-4. pp 5.2-10 and 5.2-11

The United States consumes approximately 20 million barrels of oil per day, or approximately 7,300 million barrels annually.[13] California consumes approximately 615 million barrels of

[13] US Energy information Administration. (See eia.doe.gov) http://www.eia.doe.gov/mer/pdf/pages/ sec11_7.pdf Accessed July 8, 2005.

petroleum annually, and 2,000 billion cubic feet of natural gas annually.[14] The total projected reserves of the 36 undeveloped oil leases will therefore supply California with petroleum for approximately ten months, and with natural gas for approximately one month. Total reserves represent approximately 25 days of national consumption.

2.3 Bonito, Rocky Point and Sword Units

The leases and oil fields associated with the Bonito, Rocky Point and Sword Units are depicted in Exhibit 3. Table 5 presents information on the hypothetical post-suspension development scenarios for each unit.

2.3.1 Bonito Unit

Project Description

MMS proposes to grant a Suspension of Production for Plains Exploration and Production Company's Bonito Unit for a period of 18 months. During the suspension period, PXP will revise the Development and Production Plan for Platform Hidalgo (in the Point Arguello Unit) and submit it to MMS for approval (including technical and environmental review). Activities during the suspension period will be administrative in nature, completed by PXP and/or their consultant(s) in an office setting, and involve no physical activities on the unit itself.

As discussed in Section 2.2.2: Scope of Coastal Commission Review, the Commission's environmental analysis includes hypothetical post-suspension development activities that will result from the lease suspensions. Post-suspension development of the Bonito Unit will be undertaken from facilities associated with the Point Arguello Unit, and will not require new infrastructure such as new platforms or pipelines, although minor modifications to the platforms may be necessary.

Oil and gas will be produced via extended reach drilling from Platform Hidalgo, passed through Platform Hermosa, and sent to the Gaviota Oil Heating Facility via the PAPCO and PANGL pipelines. At the Gaviota Oil Heating Facility, the oil will be metered and heated, stored temporarily in the Gaviota Terminal Company storage tanks, then transported via the All American Pipeline to various refining facilities. Gas from the Bonito Unit will be processed on the platforms, and either: 1) sent via pipeline for sale onshore, 2) used to generate electricity and heat for platform operations, 3) sent to shore to fuel the Gaviota co-generation units, and/or 4) injected into the Point Arguello Field, the Bonito field, or both.

[14] US Energy information Administration. (see eia.doe.gov) http://www.eia.doe.gov/emeu/sep/ca/frame.html Accessed July 8, 2005.

Table 5: Hypothetical Post-Suspension Development Scenarios for Bonito, Rocky Point and Sword Units

Platforms				Associated Infrastructure		Production				
								Peak Production: Oil and Gas		
Unit	**Operator**	**Production Wells, Service Wells**	**Platform, Installation Date**	**Pipeline, Installation Date**	**Onshore Facility (pipeline destination)**	**Field**	**Date of First Production**	**Volume Oil (bbl/day) Gas (Mcf/day)**	**Year**	**Expected Total Reserves Oil (MMbbl), Gas (Bcf)**
Bonito	PXP	7 2	Hidalgo 1986	Hidalgo to Hermosa, 1987	Lompoc and/or Gaviota	Bonito and Electra	2007/2009[2]	11,000 5,500	2012	22 11
Rocky Point	Arguello	12 0	Hermosa, 1985 and Hidalgo, 1986	PAPCO (Hermosa to Gaviota Facility), 1986 and Hidalgo to Hermosa, 1987	Gaviota	Rocky Point[1]	2008	18,500 5,550	2013	39 11.7
Sword	Samedan	10 1	Hermosa 1985	PAPCO 1986	Gaviota	Sword	2007	12,500 3,125	2012	29 7.3

[1]The Rocky Point Field is already in production via wells drilled from existing Point Arguello Unit platforms through the eastern half of Lease 451. The reserve numbers and peak production (vol/day) reflect the entire field's development potential.

[2]Table 5.2-4 in the EID lists the date of first production for the Bonito Unit as 2009, however Table 5.2-5 lists the date of first production as 2007. The text of the EID offers no clarification.

Background

The seven leases in the Bonito Unit, Lease Numbers 443, 445, 446, 449, 450[15], 499, and 500 were issued in Lease Sales 53 and RS2, in 1981 and 1982, respectively. (See Appendix A for details on federal lease sales.) In 1986, MMS unitized the leases into the Bonito Unit. Three oil fields lie within the Bonito Unit: from north to south, the Unnamed 443 field, the Bonito Field and the Electra Field (sometimes also referred to as the Piñon-Electra Field.) A summary of past lease suspensions for the Bonito Unit is included in Exhibit 7.

Included in each of the Bonito Unit leases are lease stipulations to mitigate potential environmental effects that may occur as a result of exploration and development, including, for example, requirements to protect sensitive biological and cultural resources, and educate operator personnel about commercial fishing activities. The full text of all lease stipulations is included as Exhibit 8. These stipulations will remain in effect during the lease suspension and the post-suspension period.

The Commission has reviewed activity in the Bonito Unit a total of six times, from 1982 until 1985. In those three years, the Commission reviewed a total of five Exploration Plans authorizing 21 exploration wells, of which seven were drilled. A complete list of Commission actions related to the Bonito Unit can be found in Exhibit 5.

Northern Bonito Unit Development

The Bonito Unit consists of seven leases (or parts of leases) containing three oil fields. As shown in Exhibit 3, Leases 499, 500 and 443 contain an oil field in the north referred to as Unnamed 443 (also known as the "Sugar Maple Field" in some reports). Leases 445, 446 and 449 contain the Bonito Oil Field in the middle of the unit, and Leases 446, 449 and 450 cover the small Electra Oil Field in the very southeast of the unit.

The EID's hypothetical development scenario provides that the existing Platform Hidalgo will be used to develop oil reserves in the southern part of the Bonito Unit, specifically the Electra and Bonito Oil Fields. (See page 5.2-14 of the EID.) The EID does not describe if or how the oil reserves in the Bonito Unit's northern Unnamed 443 Oil Field or the northern part of the Bonito Oil Field will be developed. The Commission notes that both the COOGER study and the Draft EIS for Delineation Drilling identified the need for one additional platform to develop the northern Bonito and Unnamed 443 Oil Fields in the Bonito Unit.[16]

The consistency determination specifies that all seven leases in the Bonito Unit are being considered for suspension.[17] However, there is no discussion in the consistency determination or

[15] Most of Lease 450 is located in the Point Arguello Unit; the entire lease is therefore held by production and is not being considered for suspension. The northwestern portion of Lease 450 is located in the Bonito Unit, however; therefore the lease is included in this report.

[16] See COOGER Study, page 3-44 and the Draft EIS, page 6-16.

[17] See, for example, the cover page of the Bonito Unit consistency determination, the table on page 7 of the consistency determination, and Table 2.2-1 on page 2-1 of the EID.

the EID regarding the need for a new platform to develop the northern oil fields. The consistency determination and the EID are unclear as to why the northern leases of the Bonito Unit are being extended if no development is anticipated or, on the other hand, why their extension is being determined as consistent with the CCMP without consideration of new infrastructure required to develop the northern leases of this unit. In its April 22, 2005, letter to MMS, the Commission requested clarification on this point. MMS responded to the Commission's request as follows:

> *As stated previously, extended-reach drilling technology now can reach over 7 miles under the right geological conditions. Whether those conditions exist for the development of the Bonito Unit and whether they can be economically developed is a decision that resides with the operator, depending on their development strategy. As of December, 2004, development of the Bonito Unit via extended reach drilling from Platform Hidalgo in the Point Arguello Unit, is the current development strategy proposed by the operator, and the hypothetical scenario discussed in the EID. At this time, PXP [the operator] had decided not to pursue development of this Unit from a new platform as discussed in the 2001 Draft EIS for Delineation Drilling and COOGER Study.*

Accordingly, the Commission is assuming for purposes of conducting this federal consistency review that the northern oil fields in the Bonito Unit will be developed via extended reach drilling from Platform Hidalgo, and that no new platform is needed to develop these fields. The Commission notes that any substantial modification of the proposed project, such as installing a new platform in the northern Bonito Unit, will constitute grounds for the Commission to re-open its consistency review of the lease suspensions pursuant to Section 930.45 of the regulations which implement the CZMA (15 CFR Part 930).

2.3.2 Rocky Point Unit

Project Description

MMS proposes to grant a Suspension of Production for Arguello's Rocky Point Unit for a period of 37 months. Granting the suspension will allow Arguello to prepare revisions to the Platforms Hermosa and Hidalgo Development and Production Plans and submit them to MMS for approval (including technical and environmental review). Activities during the suspension period will be administrative in nature, completed by Arguello and/or their consultant(s) in an office setting, and involve no physical activities on the unit itself.

As discussed in Section 2.2.2: Scope of Coastal Commission Review, the Commission's environmental analysis includes hypothetical post-suspension development activities that will result from the lease suspensions. Post-suspension development of the Rocky Point Unit will be undertaken from facilities associated with the Point Arguello Unit, and will not require new infrastructure such as new platforms or pipelines, although minor modifications to the platforms may be necessary. During post-suspension development, twelve extended-reach development wells will be drilled from Platforms Hermosa and Hidalgo. Each well will have a horizontal displacement of 2.5 to 3.5 miles, and will require three to four months to drill.

Oil will be dehydrated and stabilized on the platforms, then sent to the Gaviota Oil Heating Facility via the PAPCO pipeline. At the Gaviota Oil Heating Facility, the oil will be metered and heated, stored temporarily in the Gaviota Terminal Company storage tanks, then transported via the All American Pipeline to various refining facilities. Gas from the Rocky Point Unit will be processed on the platforms, and either: 1) sent via pipeline for sale onshore, 2) used to generate electricity and heat for platform operations, 3) sent to shore to fuel the Gaviota co-generation units, and/or 4) injected into the Point Arguello Field, the Rocky Point field, or both.

Hypothetical post-suspension development of the Rocky Point Unit will not require new infrastructure such as new platforms or pipelines, although minor modifications to the platforms may be necessary.

Background

The Rocky Point Unit includes two leases, 452 and 453, issued in Lease Sale 53 in 1981. The leases were unitized as the Rocky Point Unit in 1985. The Rocky Point Oil Field is already in production via wells drilled from existing Point Arguello Unit platforms into the eastern half of Lease 451 (which is not a part of any unit). The Jalama Oil Field lies to the east of the Rocky Point Oil Field within the Rocky Point Unit. A summary of past lease suspensions for the Rocky Point Unit is included in Exhibit 7.

Included in both of the Rocky Point Unit leases are lease stipulations to mitigate potential environmental effects that may occur as a result of exploration and development, including, for example, requirements to protect sensitive biological and cultural resources, and educate operator personnel about commercial fishing activities. The full text of all lease stipulations is included in Exhibit 8. These stipulations will remain in effect during the lease suspension and the post-suspension period.

The Commission has reviewed activity in the Rocky Point Unit a total of three times, all in 1982. The Commission reviewed one Exploration Plan authorizing six exploration wells, of which four were drilled. A complete list of Commission actions related to the Rocky Point Unit can be found in Exhibit 5.

2.3.3 Sword Unit

Proposed Project

MMS proposes to grant a Suspension of Production for Samedan Oil Corporation's Sword Unit for a period of 25 months. Granting the suspension will allow Samedan to update and submit a revised Exploration Plan to MMS for approval (including technical and environmental review). Activities during the suspension period will be administrative in nature, completed by Samedan and/or their consultant(s) in an office setting, and involve no physical activities on the unit itself.

As discussed in Section 2.2.2: Scope of Coastal Commission Review, the Commission's environmental analysis includes hypothetical post-suspension activities that will result from the lease suspensions. Post-suspension development of the Sword Unit will be undertaken from facilities associated with the Point Arguello Unit, and will not require new infrastructure such as new platforms or pipelines, although minor modifications to the platforms may be necessary.

During the post-suspension period, eleven development wells — ten oil wells and one service well — will be drilled from Platform Hermosa. The wells will be extended-reach wells with horizontal displacements of 3.5 to 4.5 miles. Drilling each well will require three to four months.

Oil will be dehydrated and stabilized on the platforms, then sent to the onshore Gaviota Oil Heating Facility via the PAPCO pipeline. At the Gaviota Oil Heating Facility, the oil will be metered and heated, stored temporarily in the Gaviota Terminal Company storage tanks, then transported via the All-American Pipeline to various refinery destinations. Gas from the Sword Unit will be processed on Platform Hermosa and either, 1) sent via pipeline for sale onshore, 2) used to generate electricity and heat for platform operations, 3) sent to shore to fuel the Gaviota co-generation units, and/or 4) injected into the Point Arguello Field.

Background

The Sword Unit includes four leases — Leases 319, 320, 322, and 323A — which were issued in Lease Sale 68 in 1982. In 1984, the leases were unitized as the Sword Unit. A portion of Lease 323 was relinquished and the remaining lease was redesignated 323A to reflect the change. The Sword Unit contains only the Sword Oil Field. A summary of past lease suspensions for the Sword Unit is included in Exhibit 7.

Included in all of the Sword Unit leases are lease stipulations to mitigate potential environmental effects that may occur as a result of exploration and development, including, for example, requirements to protect sensitive biological and cultural resources. The full text of all lease stipulations is included in Exhibit 8. These stipulations will remain in effect during the lease suspension and the post-suspension period.

The Commission has reviewed activity in the Sword Unit a total of four times, during the time period from 1981 until 1985. The Commission reviewed four Exploration Plans authorizing eleven exploration wells, of which three were drilled. A complete list of Commission actions related to the Sword Unit can be found in Exhibit 5.

2.3.4 Information Lacking from the Project Descriptions

The Commission recognizes that a great deal of uncertainty exists in how the post-suspension development scenarios will actually be implemented, and consequently the scenarios have been written in very general terms. Notwithstanding this uncertainty, there is important information that is currently available but which has not been included in the post-suspension development scenarios. In addition, some information presented in the scenarios is inconsistent with information presented by the operators or found in other reports. The Commission has found that MMS has not provided enough information in the consistency determinations and supporting EID regarding if and for how long the proposed post-suspension development and production activities will extend the life of existing Point Arguello Unit infrastructure. Associated infrastructure includes platforms, pipelines, power cables, and onshore facilities (e.g., Gaviota Oil Heating Facility and Arguello Pumping Station).

The Commission requested clarification from MMS regarding how the proposed suspension of leases may extend the life of existing Point Arguello Unit infrastructure.[18] The Commission requested that MMS provide the following information:

- A complete list of all infrastructure whose life could be extended by the lease suspensions and future exploration or production activity including platforms, pipelines, power cables, and onshore facilities (such as the Arguello pumping station and the Gaviota Heating/Transfer Facility). A list of structures whose life would not be extended by the lease suspensions would also be helpful.

- The projected extension of life for all infrastructure. Please provide information concerning when each structure would have been decommissioned without the suspensions, and when it would be decommissioned with the suspensions.

MMS responded to the Commission's request as follows[19]:

> *At this time, it is not possible for MMS to predict how the life the Point Arguello Unit will be affected by the additional development of the Bonito, Sword and Rocky Point Units. Field longevity is determined by many factors including economics, geological, geophysical, and engineering advancements, and development strategy. The operator of the Point Arguello Unit will be required to submit a revision(s) to the Point Arguello platform's DPP(s) to develop the surrounding fields with extended reach technology…*

As discussed in relevant sections of this report below, information regarding the potential for the lease suspensions to extend the life of existing Point Arguello Unit infrastructure is necessary for the Commission to evaluate the consistency of the lease suspensions with the CCMP. Specifically, this information is necessary for the Commission's analysis in the following issue areas: commercial fishing (Sections 30230 and 30234.5), visual resources (Section 30251), and structural stability (Sections 30253(2) and 30262(a)).

2.4 Point Arguello Unit

Point Arguello Unit leases, infrastructure and oil fields are depicted in Exhibit 3. Arguello, Inc. (a wholly owned subsidiary of PXP) operates Point Arguello Unit infrastructure to produce oil and gas from: 1) the Point Arguello Oil Field which underlies the Point Arguello Unit, consisting of Leases 315, 316, 450, and the western half of Lease 451; and 2) the Rocky Point Oil Field, which underlies the eastern half of Lease 451 (a separate "ununitized" lease, which is not part of either the Point Arguello Unit or the Rocky Point Unit). Point Arguello Unit infrastructure consists of the following major facility components:

- Platforms Harvest, Hermosa, and Hidalgo, which are located approximately ten to fifteen miles northwest of Point Conception, offshore Santa Barbara County.

[18] April 22, 2005. Letter from Alison Dettmer, CCC, to Ellen Aronson, MMS.

[19] June 23, 2005. Letter from Ellen Aronson, MMS, to Alison Dettmer, CCC.

- Subsea crude oil and natural gas pipelines that connect Platforms Harvest and Hidalgo to Platforms Hermosa.
- Subsea PAPCO crude oil pipeline and PANGL natural gas pipeline from Platform Hermosa to the onshore Gaviota Oil Heating Facility ("Gaviota Facility").
- The onshore Gaviota Facility, which is located 28 miles west of the City of Santa Barbara, on the east side of Highway 101.
- The onshore Gaviota Terminal Storage Facility, which is located adjacent to the Gaviota Facility, on the west side of Highway 101.
- The All American Pipeline Gaviota Pump Station, which is located at the Gaviota Facility.
- The All American Pipeline, which transports oil from the Gaviota Facility to refineries.

Platforms Harvest, Hermosa, and Hidalgo produce oil and gas from the underlying Point Arguello Oil Field, and use extended-reach drilling to produce oil and gas from the adjacent Rocky Point Oil Field underlying the eastern half of Lease 451. All oil and gas currently extracted from the Point Arguello Unit and Lease 451 is processed offshore on the platforms. Processed ("sweet") gas is used onsite to power the platforms, while unprocessed ("sour") gas is reinjected. Excess sweet gas and all processed oil are transported via the subsea PANGL and PAPCO pipelines to the onshore Gaviota Facility. The Gaviota Facility uses the sweet gas to generate electricity and steam for use onsite. Excess electricity can be sold to the public utility grid. The processed crude oil is pumped into the All American Pipeline for transport to the final refining destination.

2.4.1 Development History

Exhibit 6 provides a history of the Coastal Commission federal consistency actions for the Point Arguello Unit, development of the eastern half of Lease 451, and related facilities. In 1983-1984, the Commission concurred in consistency certifications (CC-12-83, CC-27-83, CC-24-84) to construct and operate Platforms Hermosa, Harvest and Hidalgo and associated subsea infrastructure (pipelines, etc.). Platforms Harvest and Hermosa were installed in 1985, and Hidalgo in 1986. The first wells started producing in 1991.

In August 2003, MMS, the Commission (NE-042-03),[20] and the County of Santa Barbara approved Arguello's proposal to develop the eastern half of Lease 451 using extended-reach drilling from Platforms Hermosa and Hidalgo. Arguello drilled five wells from Hermosa and three wells from Hidalgo, using the existing pre-approved well slots. Arguello began producing the eastern half of Lease 451 in October 2004. Under the current production scenarios for the Point Arguello Unit and eastern half of Lease 451, the estimated decommissioning/removal date for the Point Arguello platforms and pipelines is between 2015-2020.

[20] In August 2003, in no effects letter NE-042-03, the Commission concurred in the MMS approval of the project by determining that the proposed DPP amendment was not subject to additional consistency review by the Commission, because the proposed extended reach drilling would not cause effects on coastal resources substantially different than those reviewed by the Commission in the original consistency certifications for the two platforms (CC-12-83 and CC-24-84).

Until 1998, Arguello shipped Point Arguello Unit crude oil and gas to shore by pipeline for processing at the onshore Gaviota Facility. To reduce operating costs associated with declining volumes, in 1998 the operators received approval from MMS, the Commission,[21] and the County of Santa Barbara to reconfigure Point Arguello Unit operations to process (dehydrate and stabilize) all oil and gas at the offshore platforms. One oil and gas processing unit was installed on each of the platforms, Hermosa and Harvest, to process the oil and gas at these platforms. The oil and gas from Platform Hidalgo is transported by pipeline and processed on Platform Hermosa. Once oil and gas is processed at the platforms, the subsea PAPCO and PANGL pipelines transport the oil and gas from Platform Hermosa to the onshore Gaviota Facility.

2.4.2 Oil Volumes and Capacity

The 1984 Point Arguello Unit EIR/EIS estimated total recoverable oil reserves in the Point Arguello Field at 500 million barrels of oil. As of May 2005, the Point Arguello Unit and the eastern half of Lease 451 had produced a total of approximately 167 million barrels of oil. [22] Total remaining recoverable oil reserves for the Point Arguello Unit and the eastern half of Lease 451 is projected at 20 million barrels of oil.[23]

Arguello estimates that the Point Arguello Unit and the eastern half of Lease 451, combined, will produce a maximum of 31,000 barrels per day ("bpd") of oil in 2006, and that annual yields will quickly decline after 2006. Current production (2005) for both the Point Arguello Unit and eastern half of Lease 451 is 11,000 bpd of oil and 18 million standard cubic feet per day ("mmscf/d") of gas.

Daily and annual yields as well as total volume of oil and gas reserves are substantially less than the amounts anticipated when the Commission concurred in the consistency certifications for Platforms Hermosa, Hidalgo and Harvest.

The oil processing units that have been installed on the platforms restrict the maximum oil production throughput capacity of the platforms to approximately 35,0000 bpd. The equipment on Platform Harvest can process 20,000 bpd, while Platform Hermosa can process 15,000 bpd. Because oil from Platform Hidalgo is processed at Platform Hermosa, the 15,000 bpd capacity of the equipment on Platform Hermosa restricts the combined oil production of Platforms Hidalgo and Hermosa. Similarly, the design capacity of the gas processing units on each of the platforms restricts the total maximum amount of gas that can be processed at all platforms to 18 mmscf/d. Excess sour gas extracted from the wells is reinjected at the platforms.

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[21] In a letter to MMS dated December 31, 1998, Commission staff determined that the proposed amendment to the DPPs did not require federal consistency review by the Coastal Commission, because the proposed reconfiguration project would not cause coastal zone effects substantially different from those originally reviewed by the Commission.

[22] May 5, 2005. Pers. comm. Robin Blanchfield, CCC, to Joan Barminski, MMS, who obtained data from PXP/Arguello.

[23] May 19, 2005. Pers. comm. Robin Blanchfield, CCC, to Drew Mayerson, MMS, who obtained data from PXP/Arguello.

The Commission originally approved a total of 154 well slots for Platforms Hermosa, Hidalgo, and Harvest. Currently, 46 of the 154 well slots are being used for production of the Point Arguello Unit and the eastern half of Lease 451. Another five slots on Platform Hermosa will be used for future production of the eastern half of Lease 451.[24] Therefore, 103 well slots are available for future production. Table 6 describes the distribution of the well slots among the three platforms.

Table 6: Well Slots

	Harvest	Hermosa	Hidalgo
Originally approved	50	48	56
Currently in use	19	14	13
Future Lease 451 wells	0	5	0
Available	31	34	38

2.5 Related Environmental Documents

2.5.1 Environmental Assessments

Under the National Environmental Policy Act, MMS prepared six Environmental Assessments ("EAs") discussing the potential impacts of activities that will occur during the suspensions.[25] The EAs include:

- MMS Proposal to Grant Suspensions of Production for Aera Energy LLC's Lion Rock Unit, Point Sal Unit, Purisima Point Unit, Santa Maria Unit, and Lease 409
- MMS Proposal to Grant Suspension of Production for Plains Exploration & Production Company's Bonito Unit
- MMS Proposal to Grant Suspension of Production for Arguello Inc.'s Rocky Point Unit
- MMS Proposal to Grant Suspension of Production for Samedan Oil Corporation's Sword Unit
- MMS Proposal to Grant Suspension of Production for Samedan Oil Corporation's Gato Canyon Unit
- MMS Proposal to Grant Suspension of Operations for Venoco, Inc.'s Cavern Point Unit

The EAs were far more limited in scope than the subject consistency determinations, because they only addressed potential impacts from activities occurring during the suspension periods (i.e., they did not examine potential impacts from hypothetical post-suspension development). The EAs concluded that all potential impacts from activities occurring during the suspension

[24] May 5, 2005. Pers. comm. Robin Blanchfield, CCC, to Joan Barminiski, MMS. See the Commission's letter of no effects, NE-042-03.

[25] U. S. Department of the Interior, Minerals Management Service. *Environmental Assessments and Findings of No Significant Impact For Granting Suspensions of Production or Operations*. February 11, 2005. Available at http://www.mms.gov/omm/pacific/lease/2005-final-eas.htm

periods can be mitigated to an insignificant level. MMS issued findings of no significant impact based on each of the EAs on February 11, 2005. On March 9, 2005, ten conservation groups, led by the Natural Resources Defense Council and the Environmental Defense Center, filed a lawsuit in federal district court against MMS, challenging the adequacy of the EAs (*League for Coastal Protection, et al. v Norton, et al*., No. C 05-00991-CW (N.D. Cal.)).

2.5.2 Environmental Information Document

Acknowledging that the Appeals Court envisioned more extensive analysis of activities that could occur after the suspensions were granted, MMS submitted, along with the consistency determinations, an Environmental Information Document ("EID").[26] The EID evaluates the potential post-suspension activities, presented as hypothetical scenarios in the period following the suspensions. The EID analyzes activities that could potentially take place during the 2006–2030 time period, including: 1) exploration and delineation drilling, 2) platform and pipeline construction, 3) production activities, and 4) decommissioning of facilities.

2.5.3 Draft EIS for Delineation Drilling

In June 2001, MMS published a Draft EIS for Delineation Drilling ("Draft EIS" or "DEIS")[27] addressing the potential environmental effects of proposed delineation drilling from a Mobile Offshore Drilling Unit in federal waters offshore Santa Barbara County. The Draft EIS addressed potential impacts from drilling activities, as well as potential cumulative impacts for the periods 2002 through 2006, and 2002 through 2030. The Draft EIS analyzed proposed delineation drilling in the Point Sal Unit, Purisima Point Unit, Bonito Unit, and Gato Canyon Unit. The EID is based substantially on information presented in the Draft EIS.

After publishing the Draft EIS, on July 2, 2001, MMS directed suspensions on all of the undeveloped leases to provide time to prepare consistency determinations and NEPA documentation, as directed by the District Court in *California v. Norton*. Also, as a result of the Court decision, MMS postponed work on finalizing the Draft EIS, including the public hearings, and extended the comment period.

2.5.4 COOGER Study

The California Offshore Oil and Gas Energy Resources Study ("COOGER Study")[28] was designed by a joint government, industry, and public working group to address concerns about the potential demands on onshore infrastructure from expanded oil and gas development in both State and federal waters. The study assessed and compared a suite of potential Pacific OCS development scenarios for San Luis Obispo, Santa Barbara, and Ventura Counties over a 20-year

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[26] Minerals Management Service, Pacific OCS Region. *Environmental Information Document for Post-Suspension Activities on the Nine Federal Undeveloped Units and Lease OCS-P 409 Offshore Santa Barbara, Ventura, and San Louis Obispo Counties.* Prepared by Aspen Environmental Group. January 2005.

[27] Minerals Management Service, Pacific OCS Region. *Delineation Drilling Activities in Federal Waters Offshore Santa Barbara County, California.* Draft Environmental Impact Statement. Published by the US Department of the Interior, MMS, Pacific OCS Region. Document 2001-046. June 2001.

[28] Minerals Management Service. *Final California Offshore Oil and Gas Energy Resources Study: Development Scenarios and Onshore Physical Infrastructure in the Tri-County Area of San Louis Obispo, Santa Barbara and Ventura.* Prepared by Dames & Moore. OCS Report MMS 99-0043. January 26, 2000.

timeframe (1995 though 2015). The Final COOGER Study, published in January 2000, focused its constraints analysis for the potential development scenarios on industrial and public infrastructure demand within the study area.

3 COASTAL ACT ISSUES

3.1 Oil Spills

3.1.1 Introduction

Summary

Since the first federal lease sale offshore Santa Barbara in 1966, the potential for oil spills from offshore oil and gas development has been a major environmental concern. Oil spills resulting from such events as well blowouts, pipeline ruptures, operational errors, or vessel-platform collisions can lead to significant adverse effects on the marine and coastal resources of the Santa Barbara Channel, Santa Maria Basin, and southern California region. These resources include endangered or threatened species of seabirds and shorebirds (e.g., California brown pelicans, western snowy plovers), marine mammals (e.g., sea otters, stellar sea lions, humpback whales), and fishes and invertebrates (e.g., steelhead trout, tidewater goby, white abalone).

Since the time of the Commission's review of the existing platforms and support facilities, the national and even international significance of the value of the coastal and marine resources in the region — including the environmentally sensitive habitats of sandy beaches, rocky intertidal areas, and estuaries — has continued to grow. In addition to the Channel Islands National Park and Marine Sanctuary, the Santa Barbara Oil and Gas Sanctuary, the Santa Barbara Channel Federal Ecological Preserve and the Monterey Bay National Marine Sanctuary, the region now includes the San Luis Obispo State Seashore, Santa Barbara Coast Seashore, Marine Protected Areas, Areas of Special Biological Significance, Marine Preserves, State Reserves, State Refuges, State Wildlife Areas, and numerous state parks and beaches.

MMS has submitted information to the Commission on oil spill risk in the consistency determinations and the EID. A document previously released by MMS, the Draft EIS for Delineation Drilling ("DEIS")[29] also contains pertinent information on the risk of oil spills from the granting of the lease suspensions. As discussed in more detail in Section 3.1.4: Oil Spill Risk Analysis below, the EID and DEIS do not provide enough information for the Commission to analyze the potential impacts to marine and coastal resources in appropriate detail.

In a letter dated April 22, 2005, Commission staff requested additional information from MMS regarding oil spill risks. MMS's response reiterated the agency's position that the appropriate

[29] See Section 2.5: Related Environmental Documents, above. Minerals Management Service, Pacific OCS Region. *Delineation Drilling Activities in Federal Waters Offshore Santa Barbara County, California.* Draft Environmental Impact Statement. Published by the US Department of the Interior, MMS, Pacific OCS Region. Document 2001-046. June 2001.

time for a detailed analysis is when operators have submitted specific Exploration Plans and Development and Production Plans, not at the lease suspension stage. MMS stated:

> *Drilling activities, if and when they occur, can only occur after the suspension period ends and must be detailed in EP's and DPP's that are approved by the MMS and certified consistent with the CCMP by the State. Pursuant to Federal regulations at 30 CFR 250.203 and 204, and reviewable pursuant to §307(c)(3) of the CZMA, EP's and DPP's will provide details regarding oil spill risk, volumes, oil quality, etc. No EP or DPP will be approved by MMS without State concurrence with an operator-provided consistency certification or a determination by the Secretary of Commerce to override the State's objections.*

As discussed in Section 2.2.2: Scope of Coastal Commission Review, above, the Commission disagrees with MMS's position that the appropriate time to review details of oil spill risks, environmental consequences, and prevention and response capabilities for each of the hypothetical development scenarios is at the Development and Production Plan and Exploration Plan stage. Granting the lease suspensions could *prima facie* significantly increase the risk of oil spills, and consequent environmental impacts. The Commission must conduct a detailed oil spill risk analysis at the lease suspension stage in order to determine whether it is appropriate to facilitate through approval of the proposed suspensions future development of the undeveloped lease areas.

The Commission requested detailed information specifically regarding: 1) worst-case discharge volumes, 2) oil spill probabilities, and 3) oil spill trajectories. As discussed in relevant sections below, MMS has failed to provide this information to the Commission, and as a result the Commission finds it does not have sufficient information to analyze in appropriate detail potential impacts to coastal resources from a reasonably foreseeable oil spill. The Commission's lack of information in this regard is relevant to its analyses of the consistency of the granting of the lease suspensions with CCMP policies related to: marine resources and water quality (Coastal Act Sections 30230 and 30231), environmentally sensitive habitat areas (Coastal Act Section 30240), commercial fishing (Coastal Act Sections 30230 and 30234.5), access and recreation (Coastal Act Sections 30210, 30211, 30212, and 30220), and cultural resources (Coastal Act Section 30244).

Section 30232 of the Coastal Act requires the applicant to provide "protection against the spillage of crude oil, gas, petroleum products, or hazardous substances…" and to provide "effective containment and cleanup facilities and procedures" for accidental spills that do occur. As discussed in more detail below, the Commission finds that current prevention regulations and programs provide measures for maximum feasible protection against the spillage of crude oil and other hydrocarbons, and therefore granting the lease suspensions is consistent with the prevention standard of 30232. The Commission also finds that current state-of-the-art response measures cannot effectively protect California's shoreline and coastal resources from significant oil spill impacts, and therefore granting the lease suspensions is inconsistent with the response standard of 30232.

The following discussion is organized into the following topics: 1) background information, 2) oil spill risk analysis, and 3) oil spill prevention and response.

Relevant Coastal Act Sections

Section 30232 of the Coastal Act requires protection of coastal resources from oil spills, and requires effective spill containment and clean-up, as follows:

> *Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.*

Potential impacts from an oil spill are relevant to the Commission's analyses under CCMP policies related to: marine resources and water quality (Coastal Act Sections 30230 and 30231), environmentally sensitive habitat areas (Coastal Act Section 30240), commercial fishing (Coastal Act Sections 30230 and 30234.5), access and recreation (Coastal Act Sections 30210, 30211, 30212, and 30220), and cultural resources (Coastal Act Section 30244).

The public access and recreation policies of the CCMP include:

Coastal Act Section 30210:

> *In carrying out the requirement of Section4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*

Coastal Act Section 30211:

> *Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*

Coastal Act Section 30212(a):

> *Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) It is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) Adequate access exists nearby, or, (3) Agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.*

Coastal Act Section 30220:

> *Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.*

The environmentally sensitive habitat areas policy of the CCMP (Coastal Act Section 30240) states:

> *(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*
>
> *(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

The cultural resources policy of the CCMP (Coastal Act Section 30244) states:

> *Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.*

Coastal Act/CCMP policies related to marine resources, water quality, and commercial fishing are cited in the relevant sections of this report, below.

3.1.2 Regional Oil Spill History

Oil spills may occur from such events as well blowouts, pipeline breaks, operational errors, and vessel-platform collisions. The largest spill in the Pacific OCS region occurred in 1969, when a well blowout on Platform A in federal waters offshore Santa Barbara spilled an estimated 80,000 barrels of crude oil into the Santa Barbara Channel. Since 1969, there have been no further spills of this magnitude. Between 1970 and 1999, a total of 843 spills occurred that ranged from 1 barrel to 163 barrels. Most of these were less than 1 barrel. The largest was a 163-barrel spill from the Platform Irene pipeline in State waters in September 1997.[30] This spill had significant adverse impacts on the coastal resources of Santa Barbara County, and the operator was required to pay $3.25 million in damages and penalties to county, State, and federal agencies.[31]

The spill was caused by a failed flange on the subsea wet oil pipeline, exacerbated by the operator's decision to manually restart pipeline flow following an automatic shutdown caused by a pressure drop. Despite favorable weather conditions and rapid response and recovery efforts, which included use of state-of-the-art response equipment, the Platform Irene pipeline oil spill resulted in the oiling of approximately 17 miles of the Santa Barbara coastline. The oil came

[30] EID, pp. 5.3 -11 to 5.3 -12

[31] Consent Decree, *United States and People of the State of California v Torch Energy Services*. 2002. (Settlement for Natural Resources Damage Assessment.)

ashore on sandy beaches and rocky intertidal areas. Some stretches of the shoreline had oil coverage exceeding 50 percent, and the estuaries of San Antonio Creek, Honda Creek, and the Santa Ynez River were also affected. Clean-up actions, which required heavy equipment, many personnel, and removal of marine plants and other biota at the wrack line, resulted in physical disturbances to habitat.[32]

The spill most heavily affected the sandy beach nearest the origin of the spill, with light sheen, tarballs and tar patties found at several other beaches. A 2004 report indicates that Pismo clams and spiny sand crabs, "likely suffered significant mortality from the spill."[33] This report also states that rocky intertidal species including black abalone and mussels were "injured" by the spill, and reported observations of black abalone and mussel beds coated with oil along or near the shores of Vandenberg Air Force Base. An estimated 635 to 815 seabirds were oiled as a result of the spill. Animal species in the rocky intertidal zone were injured, as were beach-dwelling invertebrates. Shorebird numbers also decreased, including the endangered western snowy plover. The physical oiling of the beaches and subsequent clean-up activities affected beach-related recreational activities including walking, jogging, swimming, surfing, tidal pool viewing, fishing, and picnicking.

A loss of well control or "blowout" incident occurred on Platform Gail in November 2004, which did not result in a serious oil spill but necessitated platform shutdown and evacuation.[34] The cause was operator error: a contract employee had removed a lockdown pin, circumventing the blow-out preventer system, so that it failed to function as intended when an unbalanced condition developed in the well. The result was an uncontrolled flow of oil, gas, and seawater from the well.

Even small spills can cause significant impacts to sensitive resources. On June 15, 2005, twelve to fifteen barrels of light crude oil washed ashore onto Breton Island, Louisiana, from an offshore platform during a storm. The incident occurred during nesting season for thousands of birds at the Breton National Wildlife Refuge. Hundreds of endangered brown pelicans were killed. Approximately 1,000 oiled pelicans were recovered, including 268 live chicks.[35] Although this incident did not occur in California, it demonstrates that a very small spill from an OCS pipeline could have devastating effects on the coastal resources of the region.

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[32] *Torch/Platform Irene Oil Spill, Scoping Document for Restoration Planning*. Prepared by: Platform Irene Trustee Council, US Fish and Wildlife Service, CA Department of Fish and Game, US Air Force: Vandeberg Air Force Base, CA State Lands Commission, with assistance from Santa Barbara County Planning Development Department, Energy Division. October 20, 2004.

[33] *Ibid*. pp. 3-7

[34] http://www.mms.gov/omm/pacific/lease/Gail_Incident_Final_Draft_Report.pdf Accessed July 7, 2005.

[35] International Bird Rescue Research Center, http://www.ibrrc.org/louisiana-05.html Accessed July 7, 2005.

3.1.3 Coastal Resources at Risk from an Oil Spill

The coastal resources at risk from a marine oil spill from OCS oil and gas development include marine biota, water quality, environmentally sensitive habitat areas (e.g., rocky intertidal areas, sandy beaches, wetlands, and estuaries), commercial fishing, access and recreation, and cultural resources. The sections that follow provide a summary of potential impacts from an oil spill to each of these resources.

Marine Biota[36]

A complete description of marine resources found in the area is included in this report in Section 3.2: Marine Resources and Water Quality and as Exhibit 4. Subsections below focus on the potential effects of an oil spill on marine biota.

Sea Otters

The southern sea otter is extremely sensitive to oil spills. Lacking a layer of fat, these animals are dependent on maintaining an intact layer of air next to their skin. Oil on just a portion of the fur can cause hypothermia and death. Otters can also ingest oil when they attempt to groom their oiled fur, or when they consume filter-feeding prey that has also consumed oil.

The US Fish and Wildlife Service ("USFWS") and the Southern Sea Otter Recovery Team have specifically identified: "Managing petroleum exploration, extraction, and tankering to reduce the likelihood of a spill along the California coast to insignificant levels," as critical to southern sea otter population recovery.[37] The USFWS does not believe it is possible to avoid a catastrophic loss to the sea otter population in the event of a major spill in or near the sea otter's current range. The Southern Sea Otter Recovery Plan[38] concludes that, 1) an oil spill is likely to occur over the next 30 years (the period during which the 36 leases will be developed), 2) the probability of death in sea otters as a result of contact with oil following an oil spill is likely to be no less than 50 percent, and 3) rehabilitation of oiled sea otters following a major spill is expensive, may be detrimental to some individuals and is of questionable benefit to the population.

Other Marine Mammals

Oil may affect marine mammals through various pathways: surface contact, inhalation, ingestion, and baleen fouling. Since whales and most adult pinnipeds rely on layers of body fat and vascular control rather than a coat of fur to retain body heat, they are generally resistant to the thermal stresses associated with oil contact. However, exposure to oil can cause damage to skin, mucous, and eye tissues. The membranes of the eyes, mouth, and respiratory tract can be irritated and damaged by light oil and the resulting vapors. If oil compounds are absorbed into the circulatory system, they attack the liver, nervous system, and blood-forming tissues. Oil can collect in baleen plates, temporarily obstructing the flow of water between the plates and thereby

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[36] EID, Chapter 4.7 pp. 4.7-1 to 69 and Chapter 5.7, pp. 5.7-1 to 104

[37] *US Fish and Wildlife Service. Final Revised Recovery Plan for the Southern Sea Otter (*Enhydra lutris nereis*)*. Portland, Oregon. xi + 165 pp. 2003

[38] *Ibid.*

reducing feeding efficiency. Reduction of food sources from acute or chronic hydrocarbon pollution can be an indirect effect of oil and gas activities.

Since oil can destroy the insulating qualities of hair or fur, resulting in hypothermia, marine mammals that depend on hair or fur for insulation are most likely to suffer mortality from exposure. Most vulnerable to the direct effects of oiling among the pinnipeds are fur seals and newborn pups, which lack a thick insulating layer of fat. More than 300 harbor seals are estimated to have died in Prince William Sound as a result of the *Exxon Valdez* oil spill, and pup production and survival were also affected. The majority of the dead harbor seals recovered were pups. Seasonally, the most vulnerable marine mammal resources along the California coast between Point Conception and Ragged Point would be harbor seal haul-out areas and pupping beaches, during early spring.

Marine Birds

Direct contact of birds with oil can cause matting of plumage, resulting in reduced flying or swimming ability; loss of buoyancy, which can lead to exhaustion and death from drowning; loss of insulation, which can lead to death from hypothermia; and increased physiological stresses and reproductive failure due to ingestion of oil. Oil-related mortality is highly dependent on the life histories of the bird species involved. Birds that spend much of their time feeding or resting on the surface of the water are more vulnerable to oil spills. Cleanup efforts to remove spilled oil may also cause impacts to coastal birds. The presence of human beings during clean-up activities, and attempts to capture oiled wildlife for rehabilitation, may have the effect of flushing birds into oiled water.

Sea Turtles

Oil spills can adversely affect sea turtles by toxic external contact, toxic ingestion or blockage of the digestive tract, disruption of salt glad function, asphyxiation, and displacement of preferred habitats. Sea turtles are known to ingest oil; this may occur during feeding (tar balls may be confused with food) or while attempting to clean oil from flippers. Oil ingestion frequently results in blockage of the respiratory system or digestive tract. Some fractions of ingested oil may also be retained in the animal's tissues, as was detected in turtles collected after the *Ixtoc* spill in the Gulf of Mexico. Breathing toxic fumes from floating oil can also cause harm to sea turtles.

Red-legged frog

Oil may affect amphibians through various pathways including direct contact, ingestion of contaminated prey, and lingering sublethal impacts from oil sequestered in sediments that may linger for years. Adult red-legged frogs move down to the brackish coastal lagoons formed seasonally behind sand berms that close the mouths of rivers and streams along the south central coast. Though no direct oil contact with frogs is expected, some red-legged frogs could return to lagoons in which oil has become sequestered in sediments, before contaminated sediments are flushed into the ocean. In addition, habitat destruction could result from clean-up efforts.

Fish

Fish can be affected directly by oil, either by ingestion of oil or oiled prey. They can also be affected by uptake of dissolved petroleum compounds through the gills, by effects on fish eggs

and larval survival, and by changes in the ecosystem that supports fish. Many effects can be sub-lethal, transient, or slightly debilitating, however any stress requires energy for recovery, which can ultimately lead to increased vulnerability to disease or to decreased growth or reproductive success.

The egg, early embryonic, and larval-to-juvenile stages of fish seem to be the most sensitive to oil. The *Exxon Valdez* oil spill occurred within weeks of Pacific herring spawning along the shores of Prince William Sound, resulting in increased egg mortality and larval deformations, and site-specific occurrences of instantaneous mortality. Studies estimate that over 40 percent of the 1989 year-class was affected by *Exxon* Valdez at toxic levels. Also, fry from pink salmon emerged from their gravel spawning redds and entered the nearshore environment during the spill. Salmon and trout exposed to oil from the *Exxon Valdez* spill all showed reduced growth rates the season following the oil spill. Studies estimate that 1.9 million adult pink salmon failed to return to Prince William Sound in 1990, primarily because of a lack of growth in the critical nearshore life stage. Returns in 1991 and 1992 were most likely reduced by a total of 11 percent.

Abalone

A spill that resulted in substantial coating of subtidal rocky habitats or significant loss of attached algae within an area that supports white abalone poses the greatest risk. White abalone in water depths of less than 33 feet could also be affected by oil treated with chemical dispersants, as the oil disperses through the water column. Recovery of the black abalone could exceed seven to ten years if a significant portion of the local population was directly contacted and heavily oiled by a spill.

Plants

Plant mortality from oil spills can be caused by smothering and toxic reactions to hydrocarbon exposure. Generally, oiled marsh vegetation dies above the soil interface, but roots and rhizomes survive when oiling is not too severe. The cleanup process could exacerbate the effects of an oil spill on threatened and endangered plants.

Environmentally Sensitive Habitat Areas

Rocky Intertidal and Sandy Beach Habitat

Primary oil spill impacts to rocky intertidal and sandy beach areas include smothering, uptake in tissues, and contamination of animals using rocky habitat and beaches, such as invertebrates, seabirds, and marine mammals. Oil tends to strand high in the intertidal in the barnacle zone. Tarballs in this zone are persistent, lasting several seasons. Oil can also persist in individual tidepools.

Estuaries and Wetlands

If oil from an offshore spill enters a wetland or estuary, impacts to the resource could include irreversible alteration of the habitat, mortality of endangered birds, plants and fish, and loss of plants and animals that may be unable to populate from adjacent areas. In addition to the potential for offshore spills, several hundreds of miles of pipelines onshore carry oil products that, if spilled, could affect estuarine and wetland habitat. A spill originating from an onshore

pipeline (supporting offshore OCS oil production), especially from a pipeline break crossing a river or streambed, could send oil directly into a wetland. The cleanup process, which is another source of impacts, would consist of removal and replacement of contaminated soil and revegetation with native species. Although limited in extent, recovery could take several years, depending on the type of vegetation and wildlife affected by the spill.

Commercial Fishing[39]

Impacts to commercial fishing from an oil spill could include fouling of commercial fishing gear and vessels, closure of harbors, and preclusion of access to fishing areas. For example, as a result of the 1997 Torch oil spill, several fishermen filed claims for damages related to the spill and cleanup operations. Steve Dunn, representing the Santa Barbara Trappers, asserts that response, cleanup and repair vessels violated Vessel Traffic Corridor restrictions, resulting in lost or destroyed gear. Other fishermen similarly sought damages from loss of nets resulting from the spill and cleanup activities.[40]

Access and Recreation[41]

The mainland coast in the project region includes a number of recreational beaches and parks that attract visitors throughout the year. Oil spills have the potential to affect access and recreation at the coast by causing beach and harbor closures. Cleanup of a smaller spill (200 barrels or less) can take up to two weeks, whereas a larger spill may take 30 days or more. The wider the area that is oiled, the more locations that could be affected, and as the area of effect increases, the more difficult it becomes to substitute near-by locations in order to enjoy recreational activities. Closing a beach or recreation area could have impacts on the people who enjoy overnight camping, swimming, surfing, walking, jogging, and tidepool-watching at these parks. In addition, the Channel Islands are restricted with regard to the maximum number of visitors at any given time, and the hauling capacity of park concessionaires is limited by boat occupancy restrictions. Anacapa and Santa Cruz Islands are the most vulnerable to losing visitor days due to an oil spill. Region-wide, deployment of containment booms could result in the closure of small craft harbors.

Cultural Resources[42]

Oil-spill related impacts are not expected to affect offshore cultural resources because of the nature of clean-up operations. Onshore, oil spills could alter the chemical composition of archeological materials and render them useless for carbon-14 dating. Oil spill containment and cleanup activities could result in extensive impacts to site deposits from the excavation of containment barriers (e.g., dams, berms, and trenches), and the mechanized removal of oil-soaked earth.

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[39] EID, p. 5.13-3

[40] County of Santa Barbara Planning and Development Memorandum. Subject: Update on Torch Oil Spill for January 20, 1998 Hearing. From John Patton, Director, to Board of Supervisors. January 13, 1998.

[41] EID, p. 5.10-3

[42] EID, p. 5.8-3

3.1.4 Oil Spill Risk Analysis

Spill Volumes

The EID states that the "most likely maximum size of a major oil spill" for all 36 undeveloped leases is 2,000 barrels,[43] and uses this quantity to characterize the worst-case spill scenario for all anticipated post-suspension hypothetical development scenarios. The Commission finds this characterization is overly simple, because expected worst-case spills may vary greatly from scenario to scenario due to large differences in anticipated production and other factors. (Volumes of oil transported by offshore pipelines range from a current 6,000 barrels per day from Platform Irene to a projected 92,000 barrels per day from hypothetical SMB "B" platform. See the report analyzing the consistency determinations for the Northern Santa Marina Basin leases for details.)

The Commission requested that MMS characterize the worst-case spill scenario using the "worst-case discharge volume," rather than the most likely maximum spill size. MMS replied to the Commission's request as follows:[44]

> *The maximum spill volumes described in the EID and previously in the [DEIS] are conservative in that they were applied to the largest observed or possible spills that MMS has observed in the Pacific Region subsequent to the 1969 spill in the Santa Barbara Channel. Thus, the hypothetical 2000 barrel spill from the Arguello pipeline described in the EID is based on the size and length of that pipeline, which is anticipated to be the largest of any in the region. Analyses of project specific development and associated pipelines would indicate hypothetical spills of smaller volume…*

MMS states in the EID that: "the most likely maximum size of a major oil spill from potential future development — the maximum most probable discharge — [is] 2,000 barrels." According to MMS, this number is based on the volumes of oil in various pipelines and vessels (i.e. tanks and other containers on platforms), and is applicable to all post-suspension hypothetical development scenarios given the spill record for the Pacific Region since 1970.[45]

The Commission disagrees with MMS's position that 2,000 barrels represents the maximum reasonably foreseeable spill size. The term "maximum most probable discharge" is ill-defined in the EID,[46] and appears to be an arbitrary volume without substantive basis. The "worst-case discharge volume" is a well-defined quantity that is systematically calculated in each operator's

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[43] "The most likely maximum size of a major oil spill from potential future development — the maximum most probable discharge — 2,000 bbl, is based on the volumes of oil in various pipelines and vessels (i.e., tanks and other containers on platforms) as described in the U.S. Coast Guard Area Contingency Plans for oil spill response (e.g., USCG, 1999) (see MMS, 2001). This is the maximum volume of oil calculated to be spilled from a break in the longest Point Arguello Unit pipeline, the Hermosa to shore pipeline (A. D. Little, 2001 as cited in MMS, 2001)." EID, p. 5.3-14.

[44] June 23, 2005, MMS letter, page 47.

[45] EID, p.5.3-14

[46] *Ibid.*

oil spill response plan, following procedures given in 30 CFR 254.47, for offshore facilities, and in 49 CFR 194.105 for onshore pipelines. The estimated worst-case discharge volume varies among existing OCS facilities and can greatly exceed 2,000 barrels. For example, the estimated worst-case discharge volumes for platforms Hermosa, Hidalgo, and Harvest are 5,796, 2,809, and 8,200 barrels, respectively, assuming prompt leak detection and pipeline shutdown.[47] The current federal worst-case response planning volume for Point Arguello development is 8,200 bbl.[48] Worst-case spill volumes could potentially be larger, if the Bonito, Rocky Point, and Sword Units are developed as anticipated in the EID and the produced oil is processed offshore and transported through the Point Arguello pipelines. The 2,000-barrel maximum spill volume is also an inadequate measure of possible worst case spills from onshore pipelines,[49] or vessel-platform collisions.

The worst-case discharge volume is the accepted standard for evaluating the maximum potential volume of oil spills. Information on the worst-case discharge volume for each development scenario is necessary for an assessment of the full range and extent of potential oil spill impacts to coastal resources.

Spill Probabilities

The oil spill risk discussion in the EID focuses on the probability of "one or more spills," and offers no information on multiple spills.[50] This is an oversight that minimizes the apparent risk of spills. In its information request letter of April 22, 2005, the Commission requested that MMS provide an analysis of oil spill risk probabilities for multiple oil spills. MMS responded as follows:[51]

> *Because the EID tables indicate the probability of one* or more *(emphasis added), it does not minimize the risk of multiple spills. As indicated in the table in the comments provided to MMS (without verifying the accuracy of the calculations), the risk of two or more spills, etc. keeps decreasing as the number of spills increases. You are correct in that there is a relatively high probability of multiple spills from existing operations combined with the hypothetical development in the spill size range 50 – 999 barrels. Unfortunately, such statistics contribute very little to assessing hypothetical environmental impacts because the statistics do not give any insight into the risk of coincident spills either in time or space.*

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[47] MMS. *Oil Spill Response Plan, Point Arguello and Point Pedernales Fields*. Vol. 2, p. 10-9. November 2004.

[48] *Ibid.*

[49] For example, the worst case spill planning volume for the Platform Irene onshore pipeline (beginning at the beach) is 4,424 barrels. (*California Office of Spill Prevention and Response Supplement for the Oil Spill Response Plan for the Point Pedernales 20-inch Wet Oil Pipeline*. April, 2003. p. 4-2)

[50] EID, p. 5.3-13 to 5.3-14

[51] June 23, 2005. MMS letter, pages 47 and 48.

This response does not address the Commission's request that MMS analyze the probability of multiple oil spills individually – that is, analyze the probability of two independent spills, three independent spills, four independent spills, etc., rather than merely analyzing the probability of "one or more spills". A preliminary analysis by Commission staff, using MMS data and methodology,[52] shows that the estimated risk of multiple spills is significant, and that post-suspension development could substantially increase the probability of multiple spills over the life of the projects. Anticipated post-suspension development of the 36 leases will increase the estimated probability of *one or more spills* in the 50-999 barrel size range only slightly (from 96.8 percent to 99.9 percent). However, the estimated probability of six independent spills will rise from a current 13.6 percent to 82.5 percent, and the probability of ten independent spills will rise from 0.3 percent to 30.6 percent. Similarly, for spills of 1,000 barrels or more, the estimated probability of one or more spills will rise from 46 percent to 76.8 percent, whereas the probability of two or more spills will rise from 12.8 percent to 42.9 percent.

The Commission provides this information to indicate the importance of a multiple-spill probability analysis. It is accurate to the degree that the Commission uses available MMS data and methodology. MMS has data relating to historic spills, recoverable reserves, and other characteristics of the hypothetical post suspension development scenarios that will allow a full analysis of the probability of multiple oil spills from development of these leases. A multiple-spill probability analysis is information that should be provided by MMS in the consistency determination. Without this information, the Commission cannot assess the full range, extent, and likelihood of oil spill impacts that may be caused by granting the lease suspensions.

Additionally, the EID and DEIS do not include information on the cumulative spill risk probabilities for individual development scenarios — for example, there is no risk probability information specific to the cumulative risk of the Bonito Unit development plus the current Point Arguello Unit development, or the combined risk of the Bonito, Rocky Point and Sword developments together, plus the Point Arguello development. In its letter of April 22, 2005, Commission staff requested that MMS provide estimates of cumulative spill probabilities for each hypothetical development scenario plus existing operations. MMS did not address this request in its response letter. As a result, the Commission is unable to analyze how granting the lease suspensions may individually increase the probability of an oil spill, or the contribution that granting the lease suspensions will make to a cumulatively increased oil spill risk probability.

Spill Trajectories

Three separate oil spill trajectories analyses are presented in the DEIS and EID: 1) MMS's Oil Spill Risk Assessment ("OSRA") model, 2) the National Oceanic and Atmospheric Administration's "General NOAA Oil Modeling Environment" ("GNOME") oil spill model, and 3) an analysis of Scripps Institution of Oceanography ("Scripps") free-floating drifter

[52] Spill probability is estimated from historic oil spill data, specifically, the number of spills that have occurred for each billion barrels of crude oil handled. Once the historic spill rate is determined, an estimate of the expected mean number of spills over the expected life of a proposed project can be obtained by multiplying the estimated volume of recoverable reserves (in billions of barrels) times the spill rate (in spills per billion barrels). The probability that *N* spills will occur for the estimated mean number of spills is given by the Poisson distribution. The same model produces estimates of the probability of one or more spills, or multiple spills.

trajectories. The results of the analyses are summarized in the EID as a composite analysis, which covers the general geographic region of anticipated post-suspension development. Upon initial review of the EID, Commission staff determined that the analyses are overly general, and do not provide enough detailed information for the Commission to analyze the risk of oil spill impacts to specific coastal resources. Commission staff requested more specific trajectory information, to include:

1. Detailed trajectory analyses for each existing development project and hypothetical post-suspension scenario, using scenario-specific, maximum reasonably foreseeable spill sizes (i.e., worst-case discharge volumes); and

2. A summary of the analyses that clearly communicates the risk exposure borne by different coastal areas due to potential spills from each hypothetical development scenario, including discussions of variability and uncertainty in the estimates.

MMS responded to the Commission's request as follows:[53]

> *MMS believes it is appropriate to present generalized spill risk at this stage in the possible hypothetical future development of these undeveloped leases. MMS includes overall risk from a spill from possible future development because a spill could potentially affect geographically diverse resources in the overall area no matter the origin of the spill given the complex and varying circulation in the region…*
>
> *Project specific modeling would not add substantial resolution to the modeling of spill trajectories performed in the DEIS (1999) because the launch points for those trajectories cover the geographic domain of the projects described in the EID. Appendix Figure 5.2-1 in the DEIS indicates the launch points used in modeling. These are very near or within the units for which projects are described.*

The Commission does not agree that the generalized information provided in these analyses is appropriate at this stage of development. As discussed in Section 2.2.2: Scope of Coastal Commission Review, above, unlike a lease sale, the location and anticipated character of the post-suspension development scenarios are fairly well defined, and the available information would support a more specific analysis. Nor does the Commission agree that scenario-specific spill trajectory analyses would not "add substantial resolution." Rather, the modeling studies are overly generalized by design, and overlook factors important for evaluating oil movement and shoreline contact locations. Some major inadequacies in the analyses are summarized below.

Small scale current features

Neither the OSRA nor GNOME modeling studies appear to account for relatively fine-scale current features or changes in current patterns.[54] The importance of small scale variations is

[53] June 23, 2005 MMS letter, page 46-47.

[54] Although the model physics seem to incorporate some fine scale processes (OCS Report MMS 2000-057, p. 3-4), there is no indication that the model was empirically verified at such scales in southern California waters. In any case, much of the fine-scale information would be lost in the seasonal averaging.

stressed in a National Research Council report,[55] which states: "In the absence of most of the temporally and spatially varying part of the spectrum, the predicted trajectories may miss many aspects contributing to drift, especially at the shorter time scales. This problem plagues all modeling efforts to some extent, but is of particular concern for southern California where the variable flows are so strong."

A recent study demonstrates the importance of fine-scale current dynamics.[56] The study, which involved intensive deployment of drifters offshore Santa Barbara's southern coast between Ellwood and Naples, indicates that cross-shelf currents intermittently dominate the pattern of circulation within a few kilometers of the shore. Cross-shelf currents could drive spilled oil directly toward shore in some areas. These currents have major importance for understanding the risk of potential spills from Santa Ynez Unit and Gato Canyon Unit, particularly if the spill were from a pipeline rupture within State waters.

Temporal variability in current patterns

Both the OSRA and GNOME modeling studies appear to oversimplify the current patterns. The OSRA studies are based on seasonally averaged, modeled ocean current fields, combined with averaged surface drifter data. As a result of the averaging, the range of variability of current patterns is greatly reduced. This is a serious error, because different current "regimes" occur during each season, and the dominant current pattern may change on time scales of days to weeks.[57]

Additionally, the GNOME studies are based on the three major characteristic flow regimes that have been identified in Scripps-MMS collaborative studies (i.e., upwelling, convergent, and relaxation regimes). These three flow patterns can clearly be identified about 60% of the time.[58] With this approach, only the conceptually idealized flow patterns are modeled. Trajectories associated with hybrid flow patterns, changing patterns, and less common patterns are not modeled. Neither the OSRA nor the GNOME study analyzes storms or other conditions that could produce unusual trajectories.

Pipeline spills

Although subsea pipeline ruptures are the most likely type of oil spill from the anticipated post-suspension activities, GNOME and OSRA model only surface spills from platforms.[59] Because

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[55] National Research Council. *The Adequacy of Environmental Information For Outer Continental Shelf Oil and Gas Decisions: Florida and California*. 1989. p. 23 (see also: NRC. *Assessment of the U.S. Outer Continental Shelf Environmental Studies Program – I. Physical Oceanography*. 1990.)

[56] Ohlmann, Carter, *Transport over the Inner-Shelf of the Santa Barbara Channel, Draft final report to MMS,* March 28, 2005.

[57] DEIS, Table 5.1.3.2-2, p. 5-24.

[58] DEIS, p. 4-48.

[59] See DEIS, p. 5-20. OSRA modeling of spills from several currently existing pipelines is included in the *Oil-Spill Risk Analysis* [MMS 2000-057] cited above. However, the surface spill model is used, and the modeling is not tied into the spill analysis in the DEIS or EID. The modeled spill locations are approximately 2.5 to 6.3 miles offshore, and fail to consider possible spills closer to shore, where environmental impacts would be greater.

pipelines are closer to shore than platforms, a higher proportion of the spilled oil is likely to affect shoreline and near-shore resources. Also, subsea releases behave differently than surface spills, and require a very different modeling approach.[60] In addition, the modeling fails to consider onshore pipeline spills, which may enter marine waters and affect coastal resources.

Other weaknesses of the analysis

- **Effect of spill volume on modeled shoreline contact locations.** Because the maximum spill volume modeled was only 2,000 barrels, the GNOME model results don't provide complete information concerning the volume of oil that will contact the shore in the event of a maximum worst-case discharge.

- **Oil characteristics.** The OSRA modeling and drifter studies do not consider properties of the spilled oil, which varies considerably among reservoirs. Oil properties affect subsea plume formation and the behavior of oil on the surface, such as spreading, sinking, and expansion of volume due to mousse formation.[61] It is unclear how realistically the GNOME modeling studies account for such characteristics, if they are considered at all.

- **Shoreline contact**. The OSRA model generates estimates of conditional probabilities of shoreline contact. However, these estimates are of dubious value, given that the model uses seasonal current averages, fails to include important small-scale currents, and does not account for oil characteristics or volume. The spill trajectory analysis does not adequately connect probable shoreline contact locations with presence of sensitive resources, as necessary for evaluation of impacts.

- **Uncertainty.** The trajectory modeling does not include an error analysis or discussion of model sensitivity analysis, as recommended in the National Resource Council assessments.[62]

The oil spill modeling in the EID and DEIS is over-generalized and lacks crucial information. Hence, it does not provide the information needed for a realistic appraisal of potential impacts to specific resources in the Santa Barbara Channel and Santa Maria Basin. The modeling lacks an appraisal of what resources are likely to be affected by an oil spill incident. Without this information, the Commission cannot evaluate in appropriate detail the full range and extent of potential oil spill impacts to marine and shoreline resources.

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[60] Subsea spill models are under development by MMS, and other models may be available. See: *Technical Documentation for the Pipeline Oil Spill Volume Computer Model, SINTEF Report to MMS*. January 20, 2003. Availiable at: http://www.mms.gov/tarprojects/390/WCD%20Technical%20Description_Final-170203.pdf Accessed July 8, 2005.

[61] Mousse formation is the tendency of some oils to form emulsion, which can expand the spill volume by a factor of two to three, as apparently was the case for the 1997 Irene pipeline spill. Sinking may be a very important consideration for the heavier local oils.

[62] *Ibid.,* NRC, 1989, p. 24.

Conclusion

The oil spill risk analysis in the EID is overly general, and lacks specific information crucial to the Commission's analysis of potential oil spill impacts on coastal resources. The Commission requested additional information from MMS regarding: 1) the worst-case discharge volumes; 2) spill probability analyses for multiple spills; and 3) detailed spill trajectory analyses for each hypothetical post-suspension development scenario. Without this information, the Commission cannot evaluate in appropriate detail the full range and extent of potential oil spill impacts to coastal resources. The Commission therefore finds it does not have sufficient information to determine if granting the lease suspensions is consistent with CCMP policies related to: marine resources and water quality (Coastal Act Sections 30230 and 30231), environmentally sensitive habitat areas (Coastal Act Section 30240), commercial fishing (Coastal Act Sections 30230 and 30234.5), access and recreation (Coastal Act Sections 30210, 30211, 30212, and 30220), and cultural resources (Coastal Act Section 30244).

3.1.5 Prevention and Response Capability

Section 30232 of the Coastal Act requires an operator to provide "protection against the spillage of crude oil, gas, petroleum products, or hazardous substances…" and to provide "effective containment and cleanup facilities and procedures" for accidental spills that do occur.

After the 1989 *Exxon Valdez* oil spill, the federal and California State governments imposed tough new statutory and regulatory standards for oil spill prevention and response. Under the Oil Pollution Act of 1990, the federal government agency with the primary regulatory authority over marine waters is the US Coast Guard ("USCG"). The USCG also serves as the Federal On-Scene Coordinator ("FOSC") during an oil spill response. Under California's Lempert-Keene-Seastrand Oil Spill Prevention and Response Act (Cal. Gov't Code §8670 *et seq.*), the California State government agency with the primary regulatory authority over oil spills in state marine waters is the California Department of Fish and Game's Office of Spill Prevention and Response ("OSPR"). OSPR is the State On-Scene Coordinator during an oil spill response.

A Regional Response Team ("RRT") composed of representatives from the USCG, the US EPA, MMS, the California Office of Emergency Services, and OSPR oversees the development and implementation of three Area Contingency Plans for all waters offshore California. The Plans present procedures for joint response efforts, including procedures for mechanical recovery, dispersal, shoreline cleanup, protection of sensitive environmental areas, and protection, rescue, and rehabilitation of fisheries and wildlife.[63]

Oil spill prevention and response for the hypothetical post-suspension development scenarios are discussed in detail below.

Prevention

To reduce the likelihood of spills, OCS operators must comply with a multitude of oil spill prevention, environmental management, and worker safety regulations from federal, State, and

[63] US Coast Guard, California Office of Oil Spill Prevention and Response. *2000 Area Contingency Plan, Los Angeles and Long Beach.* 2000. Available at http://www.uscg.mil/d11/m/rrt9web/

local agencies. These include MMS, US Office of Pipeline Safety regulations; US Coast Guard Facility Response Plan regulations (33 CFR Part 154 and 155); the California Office of Spill Prevention and Response regulations (14 CCR §§790 –886) for oil spill contingency plans, inspections, and drills for pipelines in state waters and onshore facilities; State Lands Commission regulations (14 CCR §§2000 – 2017, §§2300–2407) for onshore marine terminals; Coastal Commission consistency certification and permit requirements; and Santa Barbara County permit conditions for onshore facilities.

According to the EID and DEIS Appendix 5,[64] MMS's prevention strategy includes regulations that require the use of best available technologies, training standards for operator personnel, and a rigorous inspection program. This strategy encourages industry to operate well-engineered facilities with good housekeeping practices, adequate equipment maintenance, and proper and safe operational procedures to reduce the likelihood of a spill. MMS has established inspection protocols and reporting requirements designed to effect timely detection of any spills, notification of proper authorities, and initiation of cleanup. Operators are required to conduct frequent periodic inspections to determine if pollution is occurring and to report sources of pollution to MMS.

To ensure that a facility is prepared in the event that oil is spilled, MMS has a comprehensive oil spill response program.[65] In addition, MMS tests a facility operator's response, as well as its knowledge and understanding of the Oil Spill Response Plan through oil spill exercise programs which incorporate announced and unannounced drills each quarter. For planning purposes, MMS adheres to the requirements of the USCG's National Preparedness for Response Exercises Program.[66] Facility operators must exercise their entire response plan at least once every three years. To satisfy this triennial exercise requirement, an owner or operator must conduct the following elements of the response plan: annual spill management tabletop exercise; annual deployment exercise of spill response equipment staged at an onshore location; annual notification exercise; and semiannual deployment exercise of any response equipment which the owner or operator must maintain at the facility. [67]

The Commission notes that even with these regulations and programs in place, oil spills do still occur due to human error. MMS and other federal, State, and local regulations provide feedback mechanisms for the continual improvement of operator training programs and leak detection systems.

Hypothetical post-suspension development of the Bonito, Rocky Point and Sword Units will employ existing Point Arguello Unit infrastructure, including Platforms Hermosa and Hidalgo

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[64] EID p. 5.3-7, DEIS Appendix 5 p. A5-69

[65] In accordance with MMS regulations 30 CFR §250.204 (b)(3) and Part 254, each of the OCS operators must have an approved oil spill response plan.

[66] USCG. *National Preparedness for Response Exercise Program (PREP)*. August 1994. Available at http;//www.uscg.mil/hq/g-m/nmc/response/msprep.pdf

[67] EID p. 5.3-7; DEIS Appendix 5, p. A5-69.

and associated facilities. Arguello, Inc. currently operates Point Arguello Unit infrastructure in accordance with the requirements discussed above. The Commission finds that MMS's and other applicable prevention regulations and programs provide measures for maximum feasible "protection against the spillage of crude oil, gas, petroleum products, and hazardous substance." The Commission therefore finds that granting the lease suspensions is consistent with the prevention requirements of the CCMP (Coastal Act Section 30232).

Response Technologies and Capability

Oil spill prevention measures, such as blowout protection devices and regular platform inspections, have reduced the frequency of oil spills from OCS platforms since the 1980's. However, offshore oil development in the Pacific OCS continues to pose a significant risk to the environment from oil spills.[68] Oil spill response strategies generally include: mechanical containment and recovery equipment, chemical dispersants, and in-situ burning. Each is discussed in more detail below.

Mechanical Containment and Recovery Equipment

According to the EID and DEIS Appendix 5,[69] operators in the Pacific OCS are required to keep sufficient equipment on or near the platforms to enable the immediate initiation of containment activities. Primary response equipment at the platforms is supplemented by onshore equipment operated by oil spill cooperatives formed by the lessees and operators.

Hypothetical post-suspension development of the Bonito, Rocky Point and Sword Units will employ existing Point Arguello Unit infrastructure, including Platforms Hermosa and Hidalgo and associated facilities. Arguello, Inc., currently operates Point Arguello Unit infrastructure in accordance with an existing MMS-approved Oil Spill Response Plan ("OSRP"), which incorporates the response elements discussed below, and which is updated biannually to reflect improvements in response equipment and procedures. Commission staff reviews updated OSRPs.

For primary response capability at the Point Arguello Unit platforms, the operator provides the Mr. Clean III oil spill response vessel, with a minimum of 3,000 feet of boom, advancing skimmers capable of open-ocean use, storage capability, and dispersant application equipment. Mr. Clean III is located at or near Platform Harvest, within 15-60 minutes response time to each of the Point Arguello Unit platforms. For secondary response capability, the Point Argeullo Unit platforms have access to the rest of the Clean Seas inventory of vessels and equipment, including Mr. Clean I at Santa Barbara harbor, fast response vessels, and pre-staged equipment located at Morro Bay, Avila Bay, Santa Barbara Harbor, the Carpinteria Yard in the Ventura/Port Hueneme area, and at Point Mugu Navy Base.

In the 20 years since the installation of the platforms, Clean Seas has continued to upgrade and improve the containment and recovery capability of their state-of-the art response equipment to

[68] The term "risk" encompasses both the likelihood and environmental impacts of oil spills.

[69] EID, p. 5.3-7. DEIS, p. A5-70.

best match the characteristics of the oil produced in the offshore fields. As MMS notes,[70] the additional resources of the Marine Services Response Corporation, National Response Corporation and the USCG Oil Spill Response Team are also available to assist Clean Seas in the event of catastrophic spill.

The Commission interprets the "effective containment and clean up" standard in the CCMP (Section 30232 of the Coastal Act) as the ability to keep an offshore oil spill from adversely affecting the shoreline resources of California. In the consistency certifications pertaining to OCS oil and gas development projects the Commission reviewed in the 1980's,[71] the Commission found that although the on-water oil spill containment and clean-up equipment available for response to offshore oil spills was state-of-the art, research and oil spill experience showed that its effectiveness in keeping a marine oil spill from causing significant impacts to sensitive shoreline resources was severely limited by weather, currents, and wave conditions.

Although oil spill response equipment and cleanup methods have significantly improved in the past 20 years, research and experience shows that the response capability of current state-of-the art containment and clean-up equipment continue to be very limited during conditions of rough weather and sea conditions. EPA tests have demonstrated that oil skimmers can generally only recover about 50 percent of spilled oil in calm water conditions, with decreasing effectiveness if sea conditions are rougher.[72] Booms and skimmers are also limited in their effectiveness by wave height and wind speed. According to the National Oceanic and Oceanographic Administration's ("NOAA") Office of Response and Restoration, historical data indicates that only 10-30 percent of spilled oil can be recovered by mechanical means.[73]

The lack of real-time current information can also affect the accuracy of on-water response operations. A system of buoys was deployed during the 1990s in the Santa Barbara Channel and Santa Maria Basin by Scripps Institution of Oceanography, to provide wind and current data for circulation studies. Through a cooperative agreement between MMS and Scripps, and an interagency agreement with NOAA, a monitoring array was deployed in 1999, providing real-time wind and current data. The data was made available on the internet for use in trajectory analysis during oil spill response.[74, 75] The buoys were removed in October/November, 2004, and real-time current data is no longer available. Some up-to-date oil spill response plans cite

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[70] EID, page 5.3-7

[71] CC-7-83 (Platforms Harmony and Heritage), CC-12-83 (Platform Hermosa), CC-27-83 (Platform Harvest), CC-24-84 (Platform Hidalgo), and CC-36-86 (Platform Gail).

[72] Environmental Protection Agency. *Summary of U.S. EPA OHMSETT Testing 1974-1979*.

[73] Michel, Christopherson, & Whipple. *Mechanical Protection Guidelines*. NOAA, USCG, Research Planning, Inc. 1994.

[74] http://ccs.ucsd.edu/research/sbcsmb/; http://ccs.ucsd.edu/research/sbcsmb/moorings/ Accessed July 15, 2005.

[75] DEIS, p. 4-46 to 4-48; EID, pp. 4.5-14 and -15.

the Scripps website for access to real-time current data;[76] however no plans to resume the real-time current monitoring have been announced.

Recent ocean oil spills, even those as small as the 163-barrel Torch Platform Irene pipeline spill in 1997, have demonstrated that state-of-the-art response equipment, even under the best weather and calm-sea conditions, are not effective in keeping oil off the shoreline. Current state-of-the-art mechanical response equipment cannot effectively protect California's shoreline and marine resources from significant oil spill impacts. The Commission therefore finds that the CCMP standard of "effective containment and clean up" (Coastal Act Section 30232) cannot be met using the on-water containment and clean-up equipment currently available to respond to marine oil spills from oil and gas exploration development offshore California.

Chemical Dispersants

The effectiveness of chemical dispersants can be limited by the characteristics of the oil found in the Pacific OCS oil reserves (especially the heavier oil found in the Sword Unit), as well as rough weather and sea conditions.

The Regional Response Team recently updated its policy for the use of chemical dispersants in federal offshore waters through an updated California Dispersant Plan.[77] This Plan will become part of the three California Area Contingency Plans. The California Dispersant Plan includes the results of a net environmental benefit analysis conducted for all habitats and species from the California shoreline to 200 miles offshore, and lists the oils commonly tankered into California or produced from its offshore fields. An evaluation of the "dispersibility" of these oils was included. Most oils transported into California by tanker ship have a chemical composition that might, under favorable conditions, make them candidates for chemical dispersion. However, most oils produced from California offshore fields are too heavy, persistent, and non-volatile to be suitable candidates for effective chemical dispersion with the products and resources currently available. Clean Seas has 18,000 gallons of Corexit 9527 – which is marginally effective for some of the lighter OCS crude oil – stored at its Carpinteria yard. However, Corexit 9500, which is the dispersant most appropriate for use on the heavy-grade oil that is produced from the OCS leases, is not stored in California. The closest available supply is in Texas, which could arrive in about six hours by plane. As noted in the EID,[78] the effectiveness of dispersants decreases the longer the oil is weathered due to emulsification. To be most effective, dispersants must be applied in the first 24 hours of a spill.

The California Dispersant Plan also includes: 1) a description of federal offshore waters "pre-approved" by the RRT for dispersant use, with an accompanying decision-making flowchart and resources to be used by the FOSC to assist her decision, and 2) a description of federal offshore waters for which case-by-case RRT approval must be received before the FOSC can deploy

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[76] PXP Arguello, Inc. *Core Oil Spill Response Plan*. Vol. 1, p. E-1. February, 2004.

[77] Region IX Regional Response Team. *Draft Final California Dispersant Plan and Federal On-Scene Coordinator (FOSC) Checklist for California Federal Offshore Waters*. 2005. 49 pp. + Appendix.

[78] EID, p. 5.3 -8

dispersants. Areas pre-approved for dispersant use include all federal waters (more than 3 miles from shore) except those areas within National Marine Sanctuaries (e.g., Channel Islands and Monterey Bay National Marine Sanctuaries). RRT approval on a case- by-case basis is required for State waters, sanctuary waters, and within 3 miles of California-Oregon or California-Mexico borders. Even in areas where the use of dispersants is approved, dispersants cannot be applied directly over marine mammals. The presence of marine mammals may therefore further limit the potential use of dispersants.

In conclusion, factors such as the heavy viscosity of the oil in the OCS reserves, weather and sea conditions at the time of the spill, proximity of marine mammals, and the RRT approval process may severely limit the effectiveness of dispersants as a spill response measure.

In Situ *Burning*[79]

The three California Area Contingency Plans include policies for the *in situ* burning of oil on the water's surface. RRT "pre-approval" for *in situ* burns exists for waters 35 nautical miles and further from shore. An FOSC decision to conduct an *in situ* burn in waters closer to shore requires case-by-case approval from the RRT, in consultation with the regional air board and health department.

The heavy oils produced by California offshore oil fields may, if contained properly, be burnable. The physical and chemical characteristics of this oil may require the addition of accelerants to facilitate combustion, and de-emulsifiers. There is no fire boom stored in California; however a regular boom could be used sacrificially for *in situ* burning. The presence of marine mammals in the area would preclude *in situ* burning.

As is the case with the use of chemical dispersants, factors such as the heavy viscosity of the oil in Pacific OCS reserves, weather and sea conditions at the time of the spill, proximity to sensitive marine resources, and the RRT approval process may severely limit the effectiveness of *in situ* burning as a spill response measure.

Conclusion

Current state-of-the-art mechanical response equipment, chemical dispersants, and *in situ* burning cannot effectively protect California's coastal resources from significant oil spill impacts. The Commission therefore finds that the CCMP standard of "effective containment and clean up" (Section 30232 of the Coastal Act) cannot be met using the oil spill response strategies currently available. The Commission finds that granting the lease suspensions is inconsistent with the oil spill response requirement of the CCMP (Section 30232 of the Coastal Act). Because Platforms Harvest, Hermosa, and Hidalgo are "coastal-dependent industrial facilities," granting the lease suspensions would presumptively be subject to analysis under Section 30260 of the Coastal Act. See Section 3.8: Coastal Dependent Industrial Facility "Override" Provision of this report, below.

[79] July 11, 2005. Pers. Comm. Addassi, CDFG-OSPR, and Faurot-Daniels, CCC.

3.2 Marine Resources and Water Quality

Coastal Act Section 30230 states:

> *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Coastal Act Section 30231 states:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

Hypothetical post-suspension development scenarios for the Bonito, Rocky Point and Sword Units involve development and production of oil and gas using only existing Point Arguello Unit infrastructure, specifically, Platforms Hermosa and Hidalgo and associated pipelines and facilities. No new structures will be constructed and placed either onshore or offshore. Potential impacts to marine resources and water quality could result from discharges into the marine environment associated with the drilling of production and service wells, and the operation of the platforms.

Point Conception is a significant environmental boundary along the California coast, serving as a divide between areas with different marine biology, ocean currents and temperatures, climatic influences, and other environmental characteristics. The ocean waters off Point Conception serve as one of only two major transition zones along the entire west coast of North America for coastal fishes, one of three transition areas for benthic algae, and one of five for marine invertebrates. Upwelling occurs in the area, enriching the waters, increasing primary productivity, and enhancing fishery resources.

Near Point Arguello, the Vandenberg State Marine Reserve (formerly the Vandenberg Marine Resources Protection Act Ecological Reserve) covers approximately five miles of shoreline and nearshore waters. It was established in 1994 pursuant to the California Marine Resources Protection Act of 1990. Its role as an ecological reserve is to allow scientific research on the management and enhancement of marine resources. The Reserve includes area of hard- and softbottom habitat and is the site of several studies related to marine species and benthic habitat.

The lease suspension area contains habitat for many special-status species. The Southern sea otter's current range extends into the Point Conception area. The Vandenberg State Marine

Reserve contains the highest density of black abalone along the southern California mainland. The area supports large kelp beds and diverse intertidal and subtidal communities. The kelp beds and rocky outcroppings provide excellent habitat for abalone. Harbor seal haul-out areas are located west of Point Arguello Boathouse, at Jalama, and at Point Conception. Several species of seabirds nest at Point Arguello, Rocky Point, and Point Conception, and the endangered California brown pelican is often found feeding in the area. Grey whales pass directly through the area twice each year during migration. A complete description of marine resources in the region is included in this report as Exhibit 4.

Discharges associated with the development and production of the Bonito, Rocky Point and Sword Units could adversely affect water quality and marine resources. A variety of discharges are associated with offshore oil and gas activities, including drilling muds and cuttings, produced water, well treatment, completion and workover fluids, deck drainage, and sanitary/domestic wastes. Drilling muds and cuttings and produced water contain heavy metals and several toxic chemicals, including arsenic, PCBs, benzene, mercury, and hexavalent chromium.

The Environmental Protection Agency ("EPA") regulates OCS oil and gas-related effluents through issuance of a National Pollutant Discharge Elimination System ("NPDES") permit. EPA NPDES permits, including those for OCS oil and gas platform discharges, are "listed" federal permits in the CCMP and subject to the federal consistency review requirements of the Coastal Zone Management Act.

Discharges associated with development and service wells in the Bonito, Rocky Point and Sword Units will fall under the effluent requirements of new General NPDES Permit CAG280000, which EPA submitted and the Commission concurred with on January 9, 2001, (CC-126-00) and which has been in effect since December 2004.[80] This new 5-year General NPDES permit covers discharges from *existing* OCS oil and gas platforms and any exploration activities. It imposes more stringent discharge requirements than the former NPDES permits that were in effect for platforms.

Platforms Hermosa, Hidalgo and Harvest are currently discharging under the new General NPDES Permit CAG280000. PXP, the operator of these platforms, has discussed with EPA the possibility of an individual permit for the platforms, to allow for the discharge of sulfides in produced water. In a letter dated April 1, 2005, PXP notified EPA of its intent that the subject platforms be covered under the General Permit while EPA conducts a review of sulfide criteria. Any new individual NPDES permit for these platforms would require separate review and concurrence by the Coastal Commission under the federal consistency requirements of the CZMA.

The new General Permit prescribes maximum annual discharge volumes for the Point Arguello Unit platforms, as described in Table 7 below:

[80] Although platform operators are currently discharging under the requirements of General NPDES Permit CAG280000, the Western States Petroleum Association has challenged this permit in court. (*Western States Petroleum Association v. Nastri*, No. 04-75605 (9th Cir.))

Table 7: Maximum Annual Allowable Discharges (bbls)

Platform	Cuttings	Drilling Fluids	Excess Cement	Produced Water
Harvest	12,000	53,500	2,000	32,850,000
Hermosa	11,250	41,000	2,000	40,250,000
Hidalgo	6,000	23,000	2,000	18,250,000

These requirements apply to discharges from the subject platforms, regardless of the source of the oil and gas produced by the platforms. MMS has not indicated if development of the Bonito, Rocky Point and/or Sword Units will cause the operator to exceed the limits set by the permit. If production of the undeveloped leases will cause PXP to exceed the maximum allowable discharges set by EPA, PXP will be required to apply for a new individual NPDES permit from EPA covering the excess discharges. Any new individual NPDES permit for these platforms will require separate review and concurrence by the Coastal Commission under the federal consistency requirements of the CZMA.

Notwithstanding stricter effluent discharge requirements contained in the new General NPDES permit, platform operators continue to discharge toxic pollutants into the ocean from muds and cuttings, produced water and other wastes. In its concurrence with the new General NPDES permit (consistency certification CC-126-00), the Commission made clear its concern that scientific research on the effects of oil and gas wastes on marine resources and water quality is inconclusive, and that the mass of, and toxic concentrations in, projected discharges, both individually and cumulatively, may still damage the biological productivity of coastal waters. The Commission found that the discharges may, 1) reduce the long-term productivity of certain marine species to a level below that necessary to sustain healthy populations; 2) potentially contaminate or cause changes in fish species that dwell near the platforms; and 3) cause cumulatively significant adverse impacts, such as chronic sublethal effects.

The Commission therefore found in consistency certification CC-126-00 that the discharges that occur under the new NPDES permit are inconsistent with the marine resource and water quality policies of the CCMP. The Commission nevertheless applied the "override" provision of the CCMP (Coastal Act Section 30260) for coastal-dependent industrial development activities, and concurred with the new General NPDES permit, finding that it met the tests of 30260, because: 1) alternative locations were infeasible or more environmentally damaging; 2) to do otherwise would adversely affect the public welfare; and 3) adverse environmental effects would be mitigated to the maximum extent feasible.

The Commission finds that granting the lease suspensions is inconsistent with the marine resources and water quality policies of the CCMP (Sections 30230 and 30231 of the Coastal Act), because hypothetical post-suspension development will discharge under the new General NPDES permit, and such discharges are inconsistent with these Coastal Act policies. Because Platforms Harvest, Hermosa, and Hidalgo are "coastal-dependent industrial facilities," granting the lease suspensions would presumptively be subject to analysis under Section 30260 of the

Coastal Act. See Section 3.8: Coastal Dependent Industrial Facility "Override" Provision of this report, below.

3.3 Commercial Fishing

Section 30234.5 of the Coastal Act states:

> *The economic, commercial and recreational importance of fishing activities shall be recognized and protected.*

In addition, Section 30230 of the Coastal Act provides for the protection of species of special economic significance. Potential impacts to the commercial fishing industry from the hypothetical post-suspension development scenarios include impacts caused by space conflicts and fishing preclusion zones from the placement (or retention) of structures in the water.

The operation of Platforms Hermosa, Harvest and Hidalgo currently impose a preclusion zone on commercial fishing activities, because they block access to fishing grounds and can cause snags that damage or destroy fishing gear. Platforms Hermosa, Harvest and Hidalgo impose a preclusion zone for all fishing activities except drift gillnetting of between 127 and 128 acres for each platform. There is no preclusion of drift gillnetting in the area. The total preclusion zone associated with Point Arguello Unit infrastructure is 381.8 acres (0.45 square miles).

Platforms Hidalgo and Harvest are located within Fish Block 659 and Platform Hermosa is sited within Fish Block 658. Blocks 658 and 659 are each "10-minute squares," encompassing 82 square miles each. Commercial fishing occurs within these blocks on a seasonal, quota, and trip-limit bases throughout the year. These Blocks have been fished using several gear types targeting multiple species: 1) purse seine for coastal pelagic species such as bonito and market squid; 2) trawl for ridgeback prawn, spot prawn, sole and halibut; 3) hook and line/longline for rockfish and other rocky outcrop fish and halibut; 4) trap for finfish, crab, and lobsters; 5) drift/set gillnet for shark, seabass, tuna, sablefish, thornyheads and swordfish; and 6) trolling for albacore and salmon.

Within Fish Blocks 658 and 659, vertical longlining targeting bocaccio, cowcod, chilipepper, and other red rockfish ceased after 2002. Live traps targeting nearshore species such as cabezon, lingcod, sheephead and gopher rockfish occurred only in Block 658, and also stopped after 2002. Trawling for spot prawn was banned in April 2003 and no longer occurs in either block.

Point Arguello Unit infrastructure is currently scheduled to be decommissioned between 2015 and 2020. If the proposed development will not extend the life of the platforms, then the Commission could find that development of the undeveloped leases will cause no new effects over and above those analyzed when it originally approved the platforms. On the other hand, extending the life of the infrastructure will cause new impacts to commercial fishing for the period that the infrastructure's life will be extended. The Commission therefore cannot determine what impacts, if any, the proposed lease suspensions will have on commercial fishing without information regarding a potential extension of life.

As discussed in Section 2.3.4: Information Lacking from the Project Description above, the Commission requested information regarding the proposed lease suspensions' potential to extend the life of the platforms. MMS has not provided the Commission with this information. Without this information, the Commission cannot determine whether granting the lease suspensions will cause any impacts to the commercial fishing industry, and, if it will, the magnitude of such impacts. The Commission therefore finds it lacks sufficient information to determine if granting the lease suspensions is consistent with the commercial fishing policies of the CCMP (Sections 30230 and 30234.5 of the Coastal Act).

3.4 Visual Resources

Coastal Act §30251 provides:

> *The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of the surrounding areas, and where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of the setting.*

Hypothetical post-suspension development of the Bonito, Rocky Point and Sword Units will employ existing Point Arguello Unit infrastructure, including Platforms Hermosa and Hidalgo and associated facilities. When the Commission originally reviewed the installation of Platforms Hermosa and Hidalgo, it found the platforms would cause extensive visual degradation in a highly scenic area. "The Point Conception area offers highly valuable, relatively undisturbed, and varied views." (CC-24-84)

The Commission determined Platforms Hermosa and Hidalgo to be inconsistent with the visual policy (Section 30251) of the Coastal Act (see consistency certifications CC-12-83 and CC-24-84). The Commission nevertheless applied the "override" provision of the CCMP (Coastal Act Section 30260) for coastal-dependent industrial development activities, and concurred with the installation of the platforms, finding that it met the tests of 30260, because: 1) alternative locations were infeasible or more environmentally damaging; 2) to do otherwise would adversely affect the public welfare; and 3) adverse environmental effects would be mitigated to the maximum extent feasible.

Platforms Hermosa and Hidalgo are currently scheduled to be decommissioned in 2015-2020. Retention of the platforms for any additional time period will exacerbate impacts to visual resources by extending their duration.

If the proposed development will not extend the life of the platforms, then the hypothetical post-suspension development scenarios will cause no new effects on visual resources different from those already analyzed by the Commission when the platforms were installed. On the other hand, extending the life of the infrastructure will cause new impacts on views for the period that life of the existing facilities will be extended. The Commission has requested, and MMS has not provided,

information regarding whether or not granting the lease suspensions will extend the life of the Point Arguello Unit platforms, and if so, for how long. (See Section 2.3.4: Information Lacking from the Project Description above.) Without a clear analysis of the extent to which the life of the platforms will be extended, the Commission is unable to assess the reasonably foreseeable visual impacts of the hypothetical post-suspension development scenarios.

The Commission therefore finds that it lacks sufficient information to determine whether or not granting the lease suspensions is consistent with the visual resource protection policy of the CCMP (Section 30251 of the Coastal Act).

3.5 Hazards

Coastal Act §30253(2) provides that:

> *New development shall:*
>
> *(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.*

Coastal Act §30262(a) provides, in part:

> *a) Oil and gas development shall be permitted… if the following conditions are met:*
>
> *(1) The development is performed safely and consistent with the geologic conditions of the well site.*

Hypothetical post-suspension development of the Bonito, Rocky Point and Sword Units will employ existing Point Arguello Unit infrastructure, including Platforms Hermosa and Hidalgo and associated facilities. Platform Hermosa was installed in 1985 and Platform Hidalgo in 1986. When the Commission reviewed the installation of these platforms, it found that, "geotechnical studies have revealed no major geologic hazards that would preclude development of the Point Arguello Field as proposed." (See CC-24-84 for Platform Hidalgo and CC-12-83 for Platform Hermosa.) Furthermore, the Commission found that with regard to Platform Hidalgo and associated pipelines, "No geological constraints exist at the platform site or within the pipeline corridor." (CC-24-84).

These facilities are currently scheduled to be decommissioned in 2015-2020. If development of the Bonito, Rocky Point and Sword Units will not extend the life of the platforms, it is possible that the Commission could find that development of these leases will cause no new effects over and above those analyzed when it originally approved the platforms.

If development of the Bonito, Rocky Point and Sword Units **will** extend the life of the platforms, however, in order to determine if granting the lease suspensions is consistent with Sections 30253(2) and 30262(a) of the Coastal Act, the Commission must examine whether the platforms

will continue to be structurally sound for the period that the platforms' life will be extended. The Commission therefore requires for its analysis: 1) information regarding if and for how long the hypothetical post-suspension development will extend the life of the platforms; and 2) information regarding the structural stability of the platforms. As discussed in Section 2.3.4: Information Lacking from the Project Description, above, MMS has not provided the Commission with information regarding the possibility that granting the lease suspensions will extend the life of the platforms.

To determine if the platforms will continue to be structurally sound for the period that the platforms' life will be extended, the Commission requested that MMS describe the inspection regime the platforms will be subject to in order to ensure their structural stability. MMS replied as follows:

> *The [Pacific OCS Region] has a significantly more stringent inspection program in place than what is required by the OCS Lands Act, considering the nature of the Pacific OCS and the proximity of the platforms to shore and populated areas. In April 2005, we added another Inspector to our staff to further strengthen the inspection program. Also, Engineers are now utilized to conduct the inspections. Considering their systematic and comprehensive nature and the contribution that they have made in lessees developing and implementing their Safety and Environment Management Programs, the Region will continue conducting three (3) Focused Facility Reviews (FFR's) per year. The FFR's are conducted by a team comprising of Drilling, Production, Electrical and other Petroleum Engineers with expertise in pipelines and platforms, Inspectors Environmental Scientists and US Coast Guard representatives. We fully intend to continue this stringent inspection strategy for current operations and any future operations on the undeveloped leases.*

On June 29, 2005, Commission staff contacted MMS by telephone[81] and requested a copy of the most recent FFRs MMS has conducted on Platform Gail, and on the pipelines from Platform Gail to Grace and from Grace to shore. MMS informed Commission staff that it was unwilling to provide this information, and that the information was not relevant to the question of whether an OCS lease suspension is consistent with the applicable enforceable policies of the CCMP. On July 14, 2005, Commission staff requested a copy of the most recent FFRs for Platforms Hermosa, Hidalgo, and Harvest.[82] On July 15, 2005, MMS staff informed Commission staff that it was not inclined to provide this information for the reason cited earlier.

The Commission disagrees with MMS's position that this information is not relevant to the review of the lease suspensions. The results from the tests MMS has conducted on pipeline and platform integrity are necessary to enable the Commission to determine the adequacy of existing infrastructure to handle longer oil and gas development scenarios that may be inherent in developing new units such as Bonito, Rocky Point, and Sword. The Commission further finds that this information is necessary to determine whether the reasonably foreseeable effects from

[81] June 29, 2005. Pers. comm. Mark Delaplaine, CCC, to Maurice Hill, MMS.

[82] July 14, 2005. Pers. comm. Audrey McCombs, CCC, to Maurice Hill, MMS.

extending the life of the platform and pipelines will be consistent with the geologic hazards policies of the CCMP (Coastal Act Sections 30253(2) and 30262(a)).

The Commission recognizes that MMS conducts inspections for structural stability on existing platforms, including Platforms Hermosa, Harvest and Hidalgo. However, MMS has not provided the Commission with information regarding the results of those inspections. Specifically, MMS has not indicated if the inspections show that the Point Arguello Unit facilities will continue to be structurally sound beyond their expected decommissioning dates, and if so, for how long beyond those dates.

Without information regarding whether or not the life of the Point Arguello Unit facilities will be extended by granting the lease suspensions, the Commission cannot determine if hypothetical post-suspension development will cause new effects with regard to geological hazards. Without information regarding, 1) how long hypothetical post-suspension development will extend the life of the platforms; and 2) the structural soundness of the platforms, the Commission cannot determine whether the existing Point Arguello Unit infrastructure will continue to be structurally sound for the period of time that the life of the facilities will be extended. The Commission therefore finds that it does not have sufficient information to determine if granting the lease suspensions is consistent with the hazards policies of the CCMP (Sections 30253(2) and 30262(a) of the Coastal Act).

3.6 Air Quality

The air quality policy of the CCMP (Coastal Act § 30253(3)) states:

> *New development shall:*
>
> *(3) Be consistent with the requirements imposed by an air pollution control district or the State Air Resources Control Board as to each particular development.*

Coastal Act Section 30414 further provides:

> *(a) The State Air Resources Board and air pollution control districts established pursuant to state law and consistent with requirements of federal law are the principal public agencies responsible for the establishment of ambient air quality and emission standards and air pollution control programs. The provisions of this division do not authorize the commission or any local government to establish any ambient air quality standard or emission standard, air pollution control program or facility, or to modify any ambient air quality standard, emission standard, or air pollution control program or facility which has been established by the state board or by an air pollution control district.*
>
> *(b) Any provision of any certified local coastal program which establishes or modifies any ambient air quality standard, any emission standard, any air pollution control program or facility shall be inoperative.*

> *(c) The State Air Resources Board and any air pollution control district may recommend ways in which actions of the commission or any local government can complement or assist in the implementation of established air quality programs.*

Section 307(f) of the federal CZMA specifically incorporates into the CCMP federal and State air quality standards developed under the Clean Air Act. Under the Clean Air Act, the federal government has established ambient air quality standards to protect public health (primary standards) and secondary standards to protect public welfare. The State of California has established separate, more stringent ambient air quality standards to protect human health and welfare. National and California standards have been established for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulate matter with aerodynamic diameters less than 10 microns in size ("PM_{10}"), suspended particulate matter with aerodynamic diameters less than 2.5 microns in size ("$PM_{2.5}$"), and lead. In addition, California has adopted standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles. Santa Barbara County is in attainment of all the National Ambient Air Quality Standards, including the 1-hour ozone and 8-hour ozone standards. The County is also in attainment for all State standards except the State's 1-hour and 8-hour ozone standards and the 24-hour PM_{10} standard. There is not yet enough data to determine whether the County is in attainment for the federal or State $PM_{2.5}$ standards.

The 1990 Clean Air Act Amendments transferred to the federal EPA authority for air quality on the OCS (42 USC §7627, Section 328(a)(1) of the Clean Air Act). Federal EPA regulations enacted in 1992 (40 CFR Part 55) require OCS sources to comply with applicable onshore air quality rules in the corresponding onshore area. In 1993, the EPA delegated authority to the Santa Barbara County Air Pollution Control District ("SBCAPCD") to implement and enforce the federal air requirements of 40 CFR Part 55.

Federal regulations contained in 30 CFR 250.204(b)(14), 250.303, and 250.304 specifically apply to air emissions from OCS oil and gas facilities. Regulations at 30 CFR 250.204(b)(14) require an operator to supply detailed information to MMS when the operator applies for a new or amended Development and Production Plan, including:

- Projected emissions for each proposed or modified facility for each year of operation;
- The model(s) used to determine the effect on the onshore air quality of emissions from each facility and the result obtained through the use of the model(s);
- The air quality status of any onshore area where the air quality is significantly affected by projected emissions from each facility proposed in the plan;
- The emission-reduction controls available to reduce emissions, including the source, emission-reduction control technology, reductions to be achieved, and monitoring system.

Federal regulations at 30 CFR 250.303 set significance standards for carbon monoxide, total suspended particles, sulfur dioxide, nitrogen oxides and volatile organic compounds for OCS facilities. Facilities that significantly affect air quality in a nonattainment area are required to fully reduce emissions (through Best Available Control Technology ("BACT"), additional emissions controls, or offsets), while facilities causing significant impacts in attainment or

unclassifiable areas are required to reduce emissions through BACT. These regulations also prohibit any air pollutant to exceed the concentration permitted under the national secondary ambient air quality standard or the national primary air quality standard, whichever is lowest.

Regulations at 30 CFR 250.304 allow the State Air Board to review existing facilities, such as Platforms Hermosa, Hidalgo and Harvest, to determine if those facilities are contributing significantly to onshore ambient air pollutant concentrations. If a facility is significantly affecting the air quality of the onshore area, emissions must be reduced through the application of BACT.

Air emissions expected from developing the Bonito, Rocky Point and Sword Units will come from a variety of sources including well drilling, oil production, and support activities (e.g., crew and supply boats). The CCMP's air quality policy requires any future exploration, development, and production activities to be carried out consistent with the rules and requirements of SBCAPCD. SBCAPCD Rule 202 F.6 (Drill Rig Engine Exemption) provides a permit exemption for drilling equipment if emissions from the equipment are less than 25 tons per year.

The Point Arguello Unit Platforms Hidalgo, Hermosa and Harvest are currently producing emissions under existing Permits to Operate. Emission sources associated with production of the Bonito, Rocky Point and Sword Units (e.g., marine vessels, and hydrocarbons on the platforms that might be released as a gas) will require review by the SBCAPCD, to determine if revised Permits to Operate will be necessary. Emission sources subject to permit requirements must meet BACT and emission offset requirements to ensure a net air quality benefit.

The air quality policy of the CCMP (Coastal Act Section 30253(3)) requires the Commission to rely on the applicable rules of the SBAPCD for air quality measures. Because some hypothetical post-suspension development activities may not require permits from the SBCAPCD, and all other activities will be subject to the SBCAPCD's future review and permitting requirements, the Commission therefore finds that granting the lease suspensions and subsequent post-suspension development will be carried out consistent with the rules and requirements of the SBCAPCD, and is therefore consistent with the air quality policy of the CCMP (Coastal Act Section 30253(3)).

3.7 Consolidation of Oil and Gas Development

The CCMP requires that oil and gas development facilities be consolidated to the maximum extent feasible.

Section 30250, provides, in relevant part:

> *(a) New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it…*

More specifically, Section 30262(2), requires the consolidation of oil and gas development, as provided in the following relevant part:

> *Oil and gas development shall be permitted… if the following conditions are met:…*
>
> *(2) New or expanded facilities related to that development are consolidated, to the maximum extent feasible and legally permissible, unless consolidation will have adverse environmental consequences and will not significantly reduce the number of producing wells, support facilities, or sites required to produce the reservoir economically and with minimal environmental impacts…*

The post-suspension development scenarios for the Bonito, Rocky Point, and Sword Units provide that the operators will produce the oil and gas resources of the these units using existing Point Arguello Unit Platforms Hermosa and Hildago, their associated subsea pipelines, the onshore Gaviota Oil Heating Facility, and the onshore common-carrier All American pipeline. Minor modifications may be necessary to the facilities on the existing platforms, but no new platforms, subsea pipelines, or onshore facilities or pipelines are proposed for construction.

The Commission finds that the proposed post-suspension development scenarios for the Bonito, Rocky Point, and Sword Units provide for the consolidation of new oil and gas development, and will therefore be consistent with the consolidation requirements of the CCMP (Sections 30250 and 30262(2) of the Coastal Act).

3.8 Coastal-Dependent Industrial Facility "Override" Provision

Coastal Act Section 30101 defines a coastal-dependent development or use as that which "requires a site on or adjacent to the sea to be able to function at all." Ports, commercial fishing facilities, and offshore oil and gas platforms are coastal-dependent development types that the Coastal Act gives priority over types of development on or near the shoreline. Coastal Act Section 30001.2 finds that notwithstanding the environmental effects of offshore petroleum and gas development, the location of such developments in the coastal zone may be necessary. Consequently, Coastal Act Section 30260 provides for special consideration of coastal-dependent industrial facilities that may otherwise be found inconsistent with the Coastal Act's Chapter 3 resource policies. Section 30260 is relevant to the Commission's review of suspensions of OCS oil and gas leases because such suspensions, if granted, will lead to or result in the construction of new, or new use of existing "industrial facilities" that are "coastal-dependent," as discussed in the project descriptions in Section 2.3 above. The hypothetical post-suspension development scenarios reviewed in this report involve the use of "coastal-dependent industrial facilities," including Platforms Hidalgo, Harvest and Hermosa.

Coastal-dependent industrial facilities must be evaluated under all applicable policies and standards contained in Chapter 3 of the Coastal Act. If the proposed project is inconsistent with any Chapter 3 policy, Section 30260 provides for approval of the coastal-dependent industrial development under certain conditions, notwithstanding such inconsistencies of the development. Coastal Act Section 30260 specifically states:

> *Coastal-dependent industrial facilities shall be encouraged to locate or expand within existing sites and shall be permitted reasonable long-term growth where consistent with this division. However, where new or expanded coastal-dependent industrial facilities cannot feasibly be accommodated consistent other policies of this division, they may*

> *nonetheless be permitted in accordance with this section and Sections 30261 and 30262 if (1) alternative locations are infeasible or more environmentally damaging; (2) to do otherwise would adversely affect the public welfare; and (3) adverse environmental effects are mitigated to the maximum extent feasible.*

As described in Section 3.2: Marine Resources and Water Quality of this report, granting the lease suspensions does not meet the standards of Coastal Act Sections 30230 and 30231, due to the potential for significant adverse individual and cumulative marine resource and water quality impacts caused by platform discharges. Granting the lease suspensions also does not meet the oil spill response requirement of Section 30232 of the Coastal Act, because current state-of-the-art mechanical response equipment, chemical dispersants, and *in situ* burning cannot effectively protect California's shoreline and marine resources from significant oil spill impacts (see Section 3.1.5: Prevention and Response Capability above). Since hypothetical post-suspension development involves "coastal-dependent industrial facilities," the Commission may nevertheless approve the granting of the lease suspensions if the three requirements of Section 30260 can be met: 1) alternative locations are infeasible or more environmentally damaging; 2) to do otherwise would adversely affect the public welfare; and 3) adverse environmental effects are mitigated to the maximum extent feasible.

The second test of Section 30260 states that coastal-dependent industrial development may be permitted if to do otherwise would adversely affect the public welfare. In previous sections of this report, the Commission has found that it is unable to determine whether or not granting the lease suspensions is consistent with the resource protection policies of the CCMP, because it lacks the information necessary to make that determination. Specifically, the Commission cannot determine what specific environmental impacts granting the lease suspensions may cause, as follows:

- Impacts to marine resources, water quality, environmentally sensitive habitat areas, commercial fishing, access and recreation, and cultural resources due to potential oil spills;
- Safety impacts due to potentially unstable platforms and pipelines;
- Impacts to commercial fishing, visual resources, and safety impacts due to the possibility that the life of the platforms and other facilities will be extended.

Without a detailed assessment of the potential environmental impacts that may be caused by granting the lease suspensions and subsequent post-suspension development, the Commission cannot make a determination about whether or not the public welfare will be adversely affected if the lease suspensions are not granted. The Commission is therefore unable to determine if the lease suspensions should be granted because to do otherwise would adversely affect the public welfare. Because the Commission is unable to determine if granting the lease suspensions and subsequent post-suspension development meet, at least, the second test of Section 30260, it is unable to analyze the lease suspensions for consistency with Section 30260.